

PROPERTY OF
UNIVERSITY OF
MICHIGAN
JUN 29 1946

American Aviation

The Independent Voice of American Aeronautics

JULY 1, 1946

The Landis Opportunity

AS SCHEDULED air transport enters its third decade of existence as a new form of transportation to speed the mails and commerce of the nation, a new man has assumed the chairmanship of the Civil Aeronautics Board.

He is new to aviation and aviation is new to him. His task is not an enviable one.

Fortnightly Review

James McCauley Landis is one of the country's great legal minds, a man whose knowledge of government administration is broad and authoritative. His influence in shaping the destiny of

this third decade of air transportation will be great. Along with all others who believe deeply in the necessity for a strong, economically-sound and well-balanced air transport system, we hope his influence will be good.

Two decades and a few months ago the first scheduled air mail was flown in the Far West. To the enterprise of the Post Office Department the industry owes the first twelve years of its existence. The speeding of air mail was the dominant interest. What happened politically in the early days from 1926 to 1932, the old-timers know only too well. It was rugged. But air mail grew in popularity, the airline system was reshuffled and reshaped in 1934, and an industry was built on hope, faith and enthusiasm. Too often forgotten today was the virtual absence of profits. But despite hardships and red ink, the system continued to expand.

The passage of the Civil Aeronautics Act in 1938 after three years of hearings and consideration by Congress, gave to the air transport industry its first real stability. The Act itself was excellent, but political maneuverings by a number of White House satellites—not one of which is today identified with the government—caused an unfortunate alignment of personalities to administer the Act. Several years of precious prewar time were lost forever by the bumbling and delays. The war arrived before the industry could become prepared.

The contribution of the air transport industry in the war is fresh in our memories. The transport airplane came into its own, but the airline system itself was far under-equipped. Men who built the industry made possible military operations of the transport airplane beyond the dreams of the pioneers. The foundation for great postwar expansion was laid. The great era of expansion began as soon as the war ended.

Mr. Landis is the fifth chairman to assume office. The first, Edward J. Noble, muddled badly. The second, Robert Hinckley, was some improvement. The third,

(Turn to page 6)



Heads Contract Air Cargo Division

James A. Wooten heads American Airlines new contract air cargo division, based at St. Joseph, Mo. The division will operate independently of the airline with Gilbert Air Freight of New York handling contract shipments. Wooten formerly was director of air cargo sales for American.

In This Issue

Battle of Sales Philosophy Shaping Up	
Carriers Split Into Two Camps Over Issues	13
Higher Fare Market Shows Preference for Air	
Airlines Make Gains In Rivalry With Pullman Co.	14
Non-Scheduled Carriers Oppose CAB Action	
Operators Fear Elimination From Transport Field ..	15
Navy Would Use Air Transport for Personnel	
Costs Would Be Cheaper Than Rail Or Ship	17
Senate Spurred to Act on International Convention	
Truman Asks Ratification To Protect U. S. Interests ..	24
Britain Pushes DeHavilland Dove As ... or Plane	
Aircraft Features Variety Of Seating Arrangements ...	46



**HIGH
ABOVE
ALL
IN
GLOBAL**

TRANSPORTATION THREE GREAT NAMES... THREE GREAT COMPANIES...

COLLABORATE ON THE INAUGURATION OF LONG DISTANCE AIR TRANSPORTATION WHICH ASSURES TOMORROW'S GLOBE TROTTER THE ULTIMATE IN TRAVEL... TO EVERY IMPORTANT SPOT ON EARTH. WHEN AMERICAN AIRLINES AND PAN AMERICAN WORLD AIRWAYS PUT INTO OPERATION, IN THE NOT TOO DISTANT FUTURE, THEIR GREAT FLEETS OF REPUBLIC RAINBOWS NOW ON ORDER... WITH A CRUISING SPEED OF OVER 400 M.P.H., A NEW ERA... AN ENTIRELY NEW CONCEPT... OF SPEED, COMFORT AND LUXURY WILL BE BORN... FAR IN ADVANCE OF TODAY'S BEST STANDARDS.

DESIGNED AND BUILT BY REPUBLIC AVIATION CORPORATION, FARMINGDALE, LONG ISLAND, NEW YORK

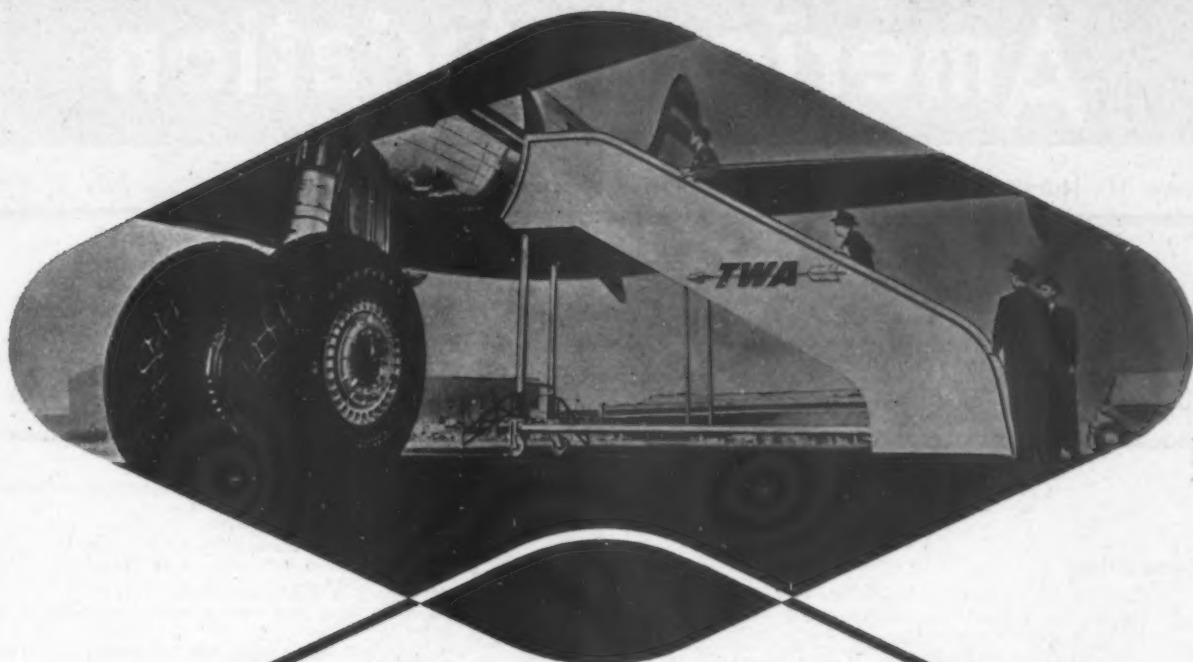
REPUBLIC



Rainbow

A PRODUCT OF **REPUBLIC AVIATION**

Makers of the Mighty Thunderbolt



They carry the Constellation

There is just one reason why so many Constellations and other super-airliners are being equipped with Goodyear tires. Both aircraft manufacturers and airline operators have learned from long experience that Goodyears are standouts in ruggedness, dependability and safety—superiorities stemming from Goodyear's 36 years of leadership in airplane tire develop-

ment. No matter what your operation, or kind of ship, there is a Goodyear tire specially designed to meet your specifications—from extra-low to highest pressure types, bodied with rayon or nylon cord to meet any load requirement. For full data, write: Goodyear, Aviation Products Division, Akron 16, Ohio or Los Angeles 54, California.



**More aircraft land on Goodyear tires
than on any other kind**

American Aviation

Volume 10, Number 3

The Independent Voice of American Aeronautics

July 1, 1946



Eric Bramley
Executive Editor

Kenneth E. Allen
Managing Editor

Russ Brinkley
News Editor

Clifford Guest
Editorial Associate

Fred S. Hunter
West Coast Editor

Wayne W. Parrish, Editor and Publisher



Gerard B. Dobben
Legislation

Daniel S. Wentz, II
Economic Regulation

Leonard Eisner
Commercial Flying

Frank M. Holz
International

David Shawe
Operations-Maintenance

Chester R. Venemann
Manufacturing

Department Editors

CONTENTS

General News

Battle of Sales Philosophy Shaping Up	13
Higher Fare Market Shows Preference For Air Travel	14
Non-scheduled Operators Oppose CAB Action	15
Weekend In Europe Is Easy Matter By Air	16
Air Transportation For Navy Personnel Proposed	17
IATA Would Reduce North Atlantic Fares	18
International Air Transport, By Sir William P. Hildred	21
Senate Spurred To Act On International Convention	24
Aircraft Service Operators Protest CAA Appropriation	25

International

Foreign Air News Roundup	28
--------------------------	----

Non-Scheduled Services

San Juan Run Proves Gold Mine To Carriers	29
---	----

Transport

ATA Considers Policy Decisions At Meeting	31
---	----

Civil Aeronautics Board

Board Questions Legal Status of Non Air Agencies	36
--	----

Airports

Consider Appointment of Aviation Director At Dallas	43
---	----

Manufacturing

Aviation Maintenance Corp. Underway With Huge Backlog	44
DeHavilland Dove Is Britain's Bid For Feeder Plane	46
Dutch Produce Difoga 421 As First Postwar Plane	48

Financial

Pan American Reports Favorable 1945 Earnings	50
--	----

Operations and Maintenance Review

Greater Utility For Small Planes Stressed at Detroit	53
Instrument Landing System Now Available to Airlines	54
C & S Installing Wright Engines on DC-4s	55

Other Features

Editorial	1	Airline Commentary	32
Letters	8	Airline Personnel	34
Books	8	CAB Activities	36
Wings of Yesterday	8	CAB Proceedings	38
Obituary	8	Manufacturing Personnel	48
Background and Trends	10	Financial Comment	52
Calendar of Events	18	Leading Aviation Securities	52
National Affairs and Congress	26	Operations Notes	54
Transport Notes	31	New Equipment	56
Index to Advertisers	58		

The News Magazine of Commercial Aviation

Business and Regional Offices

Business Manager—Thomas E. Lindsey
Advertising Director—O. R. Elofson

Main Editorial and Business Offices:

American Building, 1317 F Street, N. W., Washington 4, D. C. District 5735.

New York: 2207 RKO Building, 1270 Sixth Avenue, New York 20. Circle 6-9446.

Chicago: 139 North Clark St., Chicago 2, Ill. State 2154.

Los Angeles: 1404-S Park Central Bldg., 412 West Sixth St., Los Angeles 14, Calif. Trinity 7977.

Correspondents: James Stanton, London, England; R. N. Hughes-Jones, Melbourne, Australia; Leo White, Auckland, New Zealand; Alfonso Vasquez, Jr., Mexico City; and correspondents in major European and Latin American capitals.

American Aviation is published the 1st and 15th of each month by American Aviation Associates, Inc., American Building, 1317 F Street, N. W., Washington, D. C. Printed at the Telegraph Press, Harrisburg, Pa. Subscription rates for the United States, Mexico, Central and South American countries—\$4.00 for 1 year; \$7.00 for 2 years. Canada—\$4.50 for 1 year; \$8.00 for 2 years. All other countries—\$5.50 for 1 year; \$10.00 for 2 years. Entered as Second Class matter in Washington, D. C., and Harrisburg, Pa.

Publishing Corporation: American Aviation Associates, Inc., Wayne W. Parrish, President; C. C. Thompson, Executive Vice President; Col. Albert H. Stackpole, Vice President; Eric Bramley, Vice President; Brig. Gen. E. J. Stackpole, Jr., Secretary-Treasurer; Thomas E. Lindsey, Assistant Secretary.

Other Publications and Services:

American Aviation Daily: The only daily news service for the aviation industry. Published daily except Sundays and holidays since 1939. Dispatched via airmail or surface mail for overnight delivery in the United States. Subscriptions: \$15 one month, \$170 one year. Airmail delivery to points outside the United States at additional cost to cover postage. Service Bureau available to all subscribers. CLIFFORD GUEST, Managing Editor.

International Aviation: A weekly newsletter of aviation trends and news in foreign countries. Published on Friday of each week and dispatched via first-class surface mail. Editorial representatives in foreign capitals. Subscriptions: \$100 one year (\$2 issues). Airmail delivery available at additional cost to cover postage. Service Bureau available to all subscribers. FRANK M. HOLZ, Managing Editor.

American Aviation Directory: Published twice a year, Spring and Fall. Complete reference data on administrative and operating personnel of airlines, aircraft and engine manufacturers, accessory and equipment manufacturers, organizations, schools, U. S. and foreign aviation groups and departments, etc. Completely cross-indexed by companies, activities, products and individuals. Single copy \$5.00. Spring-Summer 1946 issue now available. DAVID SHAWE, Managing Editor.

American Aviation Traffic Guide: Monthly publication of airline schedules, rates and regulations for passenger and cargo transportation by commercial air transport. Supplements furnished subscribers covering changes occurring between issues. Subscriptions: U. S. and Latin America \$5.00 one year (12 issues and supplements); Canada \$5.50. All other countries \$6.50. Published and revised from editorial offices at 139 North Clark Street, Chicago 2, Illinois. (Telephone: State 2154). H. D. WHITNEY, Managing Editor.

Research and Library Department: For the convenience of subscribers in obtaining aviation information; bibliographic data on aviation books and periodicals available. Address inquiries to American Aviation, Research and Library Dept., Washington 4, D. C. AGNES A. GAUTREAUX, Director of Research and Libraries.



Flying Freight

American Airlines, Inc., was the first in the United States to conduct non-scheduled contract air cargo operation with volume measured in tons rather than pounds. American is now engaged in expanding this form of transport, which it pioneered.

The availability of more effective planes, Douglas C-54 aircraft, tested in wartime military service, makes this expanded operation possible.

American Airlines, Inc. is a pioneer in air transportation. The planes of American began to fly more than twenty years ago—when operation of aircraft was not profitable, even with all planes fully loaded. American looked at rows of red figures, for years—but it also looked forward, with faith in the future of air transportation. The early airplanes were not of a type which would permit carriage of air cargo at contract charges which would attract producers to the new type of transportation. But superior airplanes are available, now that the war is over.

American spent hundreds of thousands of dollars in Air Cargo market and operational research. The results of this research and the experience of American have been of substantial aid to those who have lately undertaken contract cargo operation. We are glad to have shortened the road of

experience for those who have lately entered the Air Cargo business.

American will operate an effective non-scheduled contract air cargo service, abiding by all of the applicable rules and regulations of the Civil Aeronautics Administration and the Civil Aeronautics Board. It will establish fair and reasonable contract charges for those whom it serves, low enough to attract the transportation of air cargo in volume, and high enough to permit conduct of the operation without loss. American has no intention of engaging in price wars. That is neither good for the company, the industry, nor the country.

About 6000 of the employees of American are veterans of the recent war. The organization of American Airlines represents the largest veterans group in air transportation. This service will afford many of those veterans continued employment, and its future success will afford employment for other veterans.

Years of research and hard work are beginning to produce. There is emerging an expansion of non-scheduled air cargo transportation, in which many will engage. American will continue to participate in the business which it pioneered and welcomes those whose standards of performance entitle them to success.



AMERICAN AIRLINES

Editorial

(Continued from page 1)

Harlee Branch, was the first who understood the problems and did a good job although the advent of war curtailed much CAB activity. (How much better if Branch had been first chairman!) The fourth, L. Welch Pogue, was highly regarded by the industry. He performed his tasks honestly and with broad public interest at heart, although he was not highly rated by politicians who would sacrifice a sound air transport system for a few gains by special interests. Much vital policy matter was decided during Mr. Pogue's term of office and he will long be remembered for his constructive accomplishments.

Mr. Landis may not find in the present Board and its staff all that he would like to find as he takes over the chairmanship. But he has in two men some very real and valuable experience, Harlee Branch and Oswald Ryan have been Board members since its creation in 1938, and Branch had come to the CAB from the Post Office Department in which he had been the key supervisor of air mail and the airlines during the second phase of their development. In Clarence Young, Mr. Landis will find solid industry background in addition to the experience he gained in the early Bureau of Air Commerce days.

It is a tremendously historic and economic responsibility, this CAB chairmanship. The implications and significance of the commercial airplane in today's turbulent world are almost beyond the imagination.

The problems have enormous range—from the delicate and vital international on down through domestic commerce to the extending of feeder mail and passenger service to the smallest communities in the country. And now air cargo has risen as a new and challenging field, and the CAB's responsibility for accident investigation and the formulation of civil air regulations bring its activities down to the personalized level of the individual pilot. And in addition, what happens in air transportation has the greatest bearing on national defense.

As Mr. Landis begins his work in this third decade of a great new mode of transportation, we earnestly hope that he will find the time to catch the spirit and the deep-rooted feelings which have gone into the building of the present industry. It is a highly personalized industry. It is very complex in its composition. It is unlike any other industry in the country. It is tough,

it is individualistic, it has all the ambition and the lack of restraint of a pioneer—but it is also amazingly sentimental.

We hope, too, that Mr. Landis will not be rigid in applying legalistics to an industry that requires flexibility. The new chairman's reputation as a lawyer and an authority is unquestioned, but the chairmanship requires more than mere knowledge of law. We are sure that he knows this only too well, but we hope he moves cautiously, and not hastily, in influencing departures from present policy or major decisions which have great bearing on the industry's welfare.

Lastly and most important, we hope he will keep the CAB above reproach politically. There have been too many whispers of politics of late. Too many individuals have applied pressures which may bring special advantages and temporary gains but which adversely affect the welfare of the entire industry in the public interest. There have been too many rumors of troublesome and investigatory days ahead. But the new chairman has it in his power to keep the CAB above reproach and above suspicion. He has it in his hands to maintain a quasi-judicial agency not subject to special and selfish pleadings. Mr. Landis' responsibility in this regard may be greater than he realizes at the moment, but on the other hand he is no novice in the matter.

James Landis deserves every opportunity to succeed in his new post. There is every indication that he wants to succeed. And just as important, the industry wants him to succeed. We wish him well in undertaking one of the most important governmental tasks in the United States.

Military Orders Sustained

WHEN THE WAR began coming to a close there was much discussion within the aircraft manufacturing industry as to the probable volume of military aircraft orders and especially the relation of military to commercial orders.

The newly inaugurated reporting service carried on jointly by the Bureau of the Census and the CAA, sets some new light on the whole subject. These reports provide figures on the unfilled orders as of April 30, 1946, for the entire aircraft manufacturing industry.

Here is the April 30 backlog:

Military aircraft	\$676,000,000
Personal aircraft	104,174,000
Transport aircraft ...	264,286,021

\$1,044,460,021

Thus military orders are almost double in value of the combined personal and transport orders. Despite the fact that much of the military business is for research and development, and not for actual production of aircraft, the military side of the business bids fair to hold up better than had been anticipated.

WAYNE W. PARRISH.

COX and STEVENS AIRCRAFT CORP.

MINEOLA, N. Y.

DESIGNERS AND MANUFACTURERS OF SPECIALIZED
AIRCRAFT COMPUTERS AND WEIGHING EQUIPMENT.



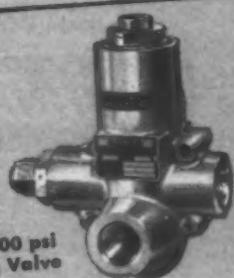
MODEL VW NAVIGATIONAL COMPUTER
AIRCRAFT ELECTRIC WEIGHING KIT
THE LOAD ADJUSTER

CHICAGO AND SOUTHERN'S DC-4 DIXIELINERS

Use **VICKERS** 3000 psi HYDRAULIC EQUIPMENT



Vickers 3000 psi
Constant Displacement
Piston Type Pump



Vickers 3000 psi
Unloading Valve



Vickers 3000 psi
Accumulator

Hydraulic equipment on Chicago and Southern's new 50-passenger DC-4 Dixieliners includes the Vickers 3000 psi units shown here.

The Vickers Piston Type Pump has a maximum recommended operating pressure of 3000 psi and maximum recommended speed of 3750 rpm at which the horsepower output is 13.3 hp. As the pump weighs only 6.8 lb, it has the exceptionally low weight/horsepower ratio of only 0.51 lb per hp. The volumetric efficiency and the overall efficiency are very high.

The Vickers Unloading Valve is used with Vickers Accumulators to accurately control maximum and minimum hydraulic system pressure regardless of flow rate. It functions as a pressure regulator, automatically unloading the pump as the accumulators reach a predetermined maximum pressure.

The 7½" Vickers 3000 psi Accumulator has the high volume/weight ratio of 13 cu in. per lb. Maximum capacity is an important feature.

Write for a copy of Vickers Bulletin 45-41 for additional information about the most complete line of 3000 psi hydraulic equipment for aircraft.

VICKERS Incorporated

1482 OAKMAN BLVD.

• DETROIT 32, MICHIGAN

**ENGINEERS AND BUILDERS OF OIL
HYDRAULIC EQUIPMENT SINCE 1921**

lack
centi-
id in
flexi-
and
p re-
sure
moves
tures
great

p the
a too
duals
ad-
affect
erest
and
as it
bove
uasi-
lead-
y be
the

ceed
vants
vants
one
nited

was
ring
craft
com-

d on
sets
ports
l 30,
stry.

0,000
4,000
6,021

0,021
most
per-
spite
itary
elop-
ction
the
etter

H.

46

Letters

Crash Program Out To the Editor:

Some time ago it was suggested that a very useful purpose to which the thousands of surplus aircraft could be put was to crash them deliberately in order to study the problems of fire following crash. The idea was very well received throughout the industry and CAA developed an excellent program which was submitted for approval. There has been practically no publicity given to the fact that the whole program has been turned down. Admittedly, the program would be expensive (this was the reason for turning it down). However, there will never again be another opportunity to conduct such research as inexpensively as it could be done at present.

It is hard to understand how anyone realizing the value of such research could possibly turn down the program at this time. The worst accident in the history of our domestic airlines, to date cost 27 lives. Sixty passenger transports are now common on our airlines and within a short time, 100 passenger transports will be just as common. It does not take very much imagination to picture the consequences of a serious crash to one of these skyway giants. Furthermore, the likelihood of fire following crash and the seriousness of fire following crash has in the past always gone up with increase in size of the aircraft. There is no reason to suppose that this condition will not continue to be true until definite steps are taken to bring about a change.

In the case of DC-3 aircraft, approximately 50% of the serious accidents resulted in fire following crash. In these fire-following crash accidents only about 20% of the persons involved survived. In order to gain some idea of the part that size, weight, and the amount of gasoline carried plays in the likelihood of fire following crash, we should note that in non-airline flying, less than 8% of the serious accidents result in fire following crash. What will happen when the size is increased from 21 passenger equipment to 100 passenger equipment, we can only guess.

In view of the above facts, it seems an almost criminal waste to break up surplus planes into scrap metal when they could serve such a useful and valuable purpose. The test program would be expensive but in view of its value and the fact that the aircraft to be used would otherwise be scrapped, serving no useful purpose, the possible return on the investment to the Government, the manufacturers, the airlines and the public would be tremendous.

Your support is needed to point out these facts and so help bring enough pressure to bear to have this flight crash research program reconsidered before it is too late.

EDWARD B. HEYL
Engineering Department
Aero Insurance Underwriters
New York, N. Y.

No Trained Personnel? To the Editor:

Recently I had the pleasure of being inducted into the armed forces of the United States.

Previous to this time I was an instructor in CAA War Training Service for 18 months. Following this curtailment I was hired by United Air Lines. I served with United on its domestic service and flew on its ATC run in the Pacific for a year. I was employed with them for 2 years, 4 months all told.

The army has given me all the classification tests they have and say I should be in the air corps. However at the present time the air corps is closed to draftees. The only way one can get in the air corps is to enlist for three years. I do not care to stay in that length of time, however I certainly think it is foolish to put a man with an aviation knowledge in the field artillery.

I have read several articles in AMERICAN AVIATION about our weak air corps. All the generals say they have no trained personnel. Well if these men ever want to get any personnel, why don't they make it possible for men to get in who don't want to sign their life away?

PVT. JACK W. PARSHALL
Port Knox, Kentucky

Books

AIRCRAFT ENGINES OF THE WORLD. 1946 edition. By Paul H. Wilkinson. Published by the author, 216 East 45th St., New York. 320 pp. Illustrated. \$9.00.

The appearance of this fourth edition of this useful reference book is most timely. Nowhere else can be found so much information on jet propulsion engines.

In the section on reciprocating engines, complete specifications for 104 powerplants are given. Over two-thirds of the material is new and a majority of the photographs are new.

In the jet propulsion section, 20 complete jet engine specification pages covering turbojets, propjets, rocketjets and pulsejets are set up in standardized page form for the first time. Complete specifications for five American jet engines as well as nine British and six German are provided. This section is undoubtedly the most complete to make its appearance anywhere and it is noteworthy that the new Jones does not mention any American jet types.

The book also contains a complete set of

Wings of Yesterday

15 Years Ago

Harry S. Russell won the Seventh National Air Tour for the Edsel B. Ford Trophy. (Ford tri-motor, Wright Cyclone and 2 Wright J-6 motors.) July 4-25, 1931).

The Aeronautical Chamber of Commerce gave a dinner in honor of Wiley Post and Harold Gatty. (July 7, 1931).

Eastern Air Transport, Inc. inaugurated air mail service between New York and Atlantic City, N. J. (July 10, 1931).

Eastern Air Transport, Inc. inaugurated air mail service between Philadelphia, Pa. and Atlantic City, N. J. (July 15, 1931).

Captain George Endres and Captain Alexander Hagyar flew from Harbor Grace, Newfoundland to Bicske, Hungary, in 26 hours, 12 minutes. They flew a Lockheed Sirius equipped with a Pratt and Whitney Wasp motor. (July 15-16, 1931).

25 Years Ago

Eddie Hubbard completed first Government mail contract, with 100 per cent efficiency service, carrying 927,000 letters between Seattle and Victoria in 84 months. (July 1, 1921).

French aerial transport was started between France and Casablanca, Morocco. (July 1, 1921).

Three Army Air Service planes from Fort Sill, Oklahoma patrolled and relieved the flooded district at Pueblo, Colorado. (July 2-4, 1921).

Royal Air Force Pageant held at Hendon, London, England. (July 2, 1921).

Photographs of the Carpentier-Dempsey fight were delivered by planes in San Francisco 48 hours, 45 minutes after leaving Hoboken, N. J. (July 4, 1921).

Professor Bailey Willis, president, Seismological Society of America, made an aerial study of San Andreas rift, the line of earthquakes of 1857 and 1906 in the California Coast Range. (July 9-11, 1921).

Obituary

Thomas M. Lemly

Funeral services were held June 17 in Jackson, Miss. for Thomas Moore Lemly, 37, assistant to the vice president of traffic, Delta Air Lines, who died June 15 in Atlanta following an operation. Lemly served as a major in the Air Transport Command during the war. Prior to the war, he had served as district traffic manager for Delta at Cincinnati.

reciprocating engine tabulations presenting data of the latest aircraft engines of the U. S., Great Britain, Australia, Brazil, France, Spain, Sweden, Switzerland and the U.S.S.R. For reference purposes the book is very well arranged. It contains an excellent index.

W. W. P.

Dinkler Hotels

serve eight great
Southern Cities

ATLANTA

The Ansley
"Joe" Crocy, Manager

BIRMINGHAM

The Tutwiler
Ira Fulton, Manager

NEW ORLEANS

The St. Charles
John "Mike" O'Leary, Mgr.

SAVANNAH

The Savannah
George Fowler, Manager

NASHVILLE

The Andrew Jackson
Len Murrell, Manager

MONTGOMERY

The Jefferson Davis
Homer Spive, Manager

LOUISVILLE

The Kentucky
James Ruskin, Manager

GREENSBORO

The O. Henry
Leon Womble, Manager

CARLING DINKLER,

President
CARLING DINKLER, Jr.,
Vice Pres. and Gen. Mgr.

4 big reasons for selling AEROMATIC PROPELLERS



Latest 4-place personal planes on the market, North American Navions are equipped with Aeromatics . . . cruise at 150 m. p. h. . . . have a range of 700 miles.

1 Larger Profits

An Aeromatic Propeller has a high market value . . . makes more money for you . . . because it does so much to improve a light plane's performance.

2 Lower Sales Cost

Aeromatic Propellers are easier to sell than most high quality equipment . . . because their advantages are so basic, so simple to demonstrate to a prospect.

3 Build Better Customers

Aeromatic owners are better buyers of your other goods and services. They buy more . . . because they fly more . . . because they get more fun out of flying their Aeromatic-equipped planes.

4 Customers Sell Their Friends

Better take-offs, climbing, cruising and landings make enthusiastic Aeromatic owners eager to convince their fellow pilots of these benefits.

BETTER TAKE-OFF, CLIMBING, CRUISING, LANDING MAKE MANY PRIVATE FLIERS AEROMATIC PROSPECTS

Aeromatic Propellers have that ideal combination of yielding a profitable return on the initial sale . . . and helping bring *more business* your way thereafter. And there's the further advantage of selling an exclusive item, too . . . since Aeromatic is the *only* fully automatic variable pitch propeller!

Without any controls or gadgets, the Aeromatic Propeller varies its own pitch in response to natural forces . . . utilizes full engine power at rated speed . . . insures maximum performance under all flight conditions. That means up to 33% shorter take-off runs . . . up to 25% faster climbing . . . top cruising performance on minimum fuel consumption . . . long, flat glides for landing with a quick pick-up if pilot overshoots his field.

Performance like that makes Aeromatic Propellers easier to sell . . . insures satisfied customers. If the planes you are now selling do not already include Aeromatic Propellers as standard or optional equipment . . . write today to your distributor or manufacturer. Point out how Aeromatic can do the double job of improving flight efficiency and boosting profits for the planes you sell! Aeromatic, 637 Scott Street, Baltimore 3, Maryland.

AEROMATIC PROPELLERS ARE ALSO FACTORY EQUIPMENT ON:			Republic Seabees (Aeromatic Adjustable Pitch Propellers)
Globe Swifts	Johnson Rockets	Bellanca Cruisers	

THE PROPELLER WITH A BRAIN FOR EVERYMAN'S PLANE
Air-controlled automatic propeller



KOPPERS COMPANY, INC., BARTLETT-HAYWARD DIVISION

HANGAR FLYING



THE WET LOAD

The first cargo carried by the *Constellation* was put aboard via a four-inch fire hose. It consisted of 8.8 tons of water. This doesn't sound like a very intelligent choice of payload, but under the circumstances it was.

When Lockheed engineers first took No. 61 (the test *Constellation*) into the air, they wanted to know how the ship reacted to shifts in its center of gravity. So they originated and installed a system of water ballast tanks. The interior of the cabin looked like a cross between a hardware store and an aquarium.



By merely turning various valves, engineers could shift a ton or two of load from here to there in flight. Much easier than lugging sandbags around, and a lot more accurate. And since flight test costs on the *Constellation* ran to about \$6200 an hour, the system more than paid for itself by speeding up the whole test program.

This rig, another example of the old Lockheed moxie, proved to engineers that the *Constellation* is a remarkably stable plane. More so, in fact, than any other large transport.

L to L for L

© 1946, Lockheed Aircraft Corporation, Burbank, California

Background

(Significant Developments and Forecasts)

Freight Agreement: The long-awaited air freight agreement of the certificated carriers was to be filed with the CAB. More than 10 carriers were to be parties to the agreement. Filing of a consolidated tariff will await CAB action on the policy-making agreement. Approval will relieve the airlines from operations of federal anti-trust laws.

Big Claims: Officials of Canadair, Ltd., government-owned Canadian company which is building the DC-4M for Trans-Canada Air Lines and the Royal Canadian Air Force Transport Command, aren't putting out any statements on what they believe the airplane will do, but privately they are making big claims for the Rolls-Royce-powered aircraft. Until the first DC-4M has flown and thoroughly tested, no statements will be made, but officials believe it will have a surprisingly high cruising speed, carry a larger payload than might be expected, and be comparatively cheap to operate.

Show Postponed: The Aircraft Industries Association-sponsored West Coast air show, originally scheduled for Los Angeles in November, has been postponed until spring. Primary reason was inability to secure adequate space, but AIA also wanted to hold off until it could expand the event into something of national import. The spring show will be held at Los Angeles municipal airport as originally planned. Building at the airport is far behind schedule, and facilities which were to have been occupied this summer, probably won't be ready until December.

Claims Refuted: U. S. aircraft manufacturers are taking a dim view of the wealth of publicity coming from England on purported British superiority in development of the jet engine for commercial use. Their chief concern is that the airlines may be "sold" on the British publicity and will curtail orders for piston-engine-powered aircraft. U. S. manufacturers, who say quite frankly they can out-produce the British in both engines and airframes, complain further that the Army and Navy won't let them talk about what they are producing in the way of engines and aircraft.

Lower Air Mail: Air mail loads on the airlines still are dropping, but not to the same extent as was the case in past months. Post Office officials are relying on 5c air mail postage to correct the situation and are pushing hard on a bill now before Congress. The bill has passed the House, but has slowed down in the Senate post offices and post roads committee, which recently changed chairmanship.

Exports-Imports: For the first time, Bureau of the Census is issuing monthly air imports and exports statistics, showing volume and value passing through individual airports. For January and February, Miami was far in the lead with 57% of imports by weight and 57% by value, and 47% and 45%, respectively, of exports. New Orleans and Houston were not listed.

Steamship Issue: CAB Vice Chairman Oswald Ryan blew away some of the smokescreen thrown up by steamship companies in their attempts to get into air transportation. In a speech before the New Orleans Association of Commerce, Ryan told the shippers to submit the argument to the final decision of a U. S. Court of Appeals. Ryan underscored the point that to date no steamship company has asked for a court review of the Board's stand on the entry of surface carriers into scheduled air transportation. The challenge to submit the argument to a court shows that the CAB believes it is on firm ground in keeping these companies out of the air—and probably indicates that the Board has been somewhat nettled by the shipping interest's attempts to create the impression that they were being shut out of air transport solely by the caprice of a government agency.

Tough Route: Southwest Airways, recently certificated feeder carrier, will fly what is probably the toughest weather route in the country when it begins operations between San Francisco and Medford, Ore., via Santa Rosa, Ukiah, Fort Bragg and Eureka. Reports show more fog along this route than any other airway.

una
and Foreign

ement
More
g of a
aking
ations

owned
rans-
nsport
y be-
g big
first
ill be
cruis-
, and

spon-
ngeles
reason
ed to
f na-
ngeles
irport
been
mber.

ing a
d on
ngine
may
s for
o say
gines
won't
y of

are
past
stage
y be-
owed
which

ensus
wing
For
% of
re-
isted.

blew
anies
a be-
the
U. S.
e no
ard's
rans-
court
these
board
mpts
f air

ated
ther
San
ragg
any

POSTAGE
WILL BE
PAID BY
ADDRESSEE

NO
POSTAGE
STAMP
NECESSARY
IF MAILED
IN THE
UNITED
STATES

BUSINESS REPLY CARD
FIRST CLASS PERMIT NO. 2455-R. SEC. 510 P. L. & R., HARRISBURG, PA.

AMERICAN AVIATION

American Building,

Washington 4, D. C.



**MAIL ME THE NEXT
YEAR OF AMERICAN
AVIATION (24 ISSUES)
AND SEND BILL
for \$4.00**

1 year \$4.00 for U. S., Mexico,
Central and South American Countries,
Canada. 1 year \$4.50. All other
countries 1 year \$5.50.

Send magazines to

Name _____
Address _____
City and State _____ Zone _____
Occupation _____
Company _____

Send bill to

Name _____
Address _____
City and State _____ Zone _____

Policy Statement: The industry's stand on recently announced government programs for research and development in the realm of supersonic speeds has been clarified by Aircraft Industries Association. In a policy statement, AIA would have NACA pursue basic research, military facilities would concentrate on evaluation and industry would be concerned with development of the product. Manufacturers agree with need for large, government-owned test facilities, but also pointed out they must be available to industry for development testing.

Moves to the West: Lightplane manufacturers are looking toward the West for sites on which to establish expanded production facilities. Taylorcraft is seeking two such sites and has been negotiating for plants at Tulsa, Okla., and Fresno, Calif. Fairchild is reported to be looking around for a lightplane production plant, preferably in the midwest.

Military Planes: North American has expanded its engineering flight section to test three new military aircraft—two for the Army and one for the Navy . . . Three more models of the XB-43 are on the line at Douglas Aircraft, Santa Monica. They are all different in one respect or another. First of them now is being tested at Muroc.

Pressure Increases: As aircraft production increases, pressure is expected to grow for easier terms of financing aircraft sales. Present Federal Reserve regulations, designed in 1944 to curb inflation, require at least one-third down payment, the balance in 12 months and do not allow trade-in value to count toward down payment. Terms similar to automobile financing will be sought. Auto sales are permitted with credit terms of 15 months with trade-in credited toward one-third initial payment.

Sleeper Planes: European operators are predicting early appearance of modified versions of sleeper planes. KLM is studying removal of every other seat to make possible reclining chairs with comfortable foot rests. The British, too, are said to be working on a sleeper version in an effort to remove some of the tedium of long over-ocean flights.

Articulate Spokesman: Sir William P. Hildred, director general of the International Air Transport Association, promises to be an effective and articulate spokesman for the organization. The former director general of British civil aviation spoke recently before the Montreal Board of Trade's aviation meeting and observers were impressed by his forcefulness and humor. He blasted the red tape which surrounds air travel, calling it a "time-consuming, humiliating indignity." And he also "gave the lie" to any notion that IATA would be a means of keeping fares up, stating that IATA's purpose was to "make flying safer, cheaper and more regular," and that any change in that policy would be followed by his resignation. Conclusion of the observers present was that IATA had picked a good man.

Manufacturing Notes: British Air Commodore Whittle, inventor of the turbo-jet engine, now is in the U. S. for an extended tour of Army installations and aircraft manufacturing plants . . . LaMotte T. Cohu, Northrop's general manager, will be an observer at the Bikini atom bomb tests as a guest of the AAF . . . Republic Aviation's Farmingdale plant was closed June 28, will remain so until July 8 for vacations . . . Glenn L. Martin will construct a \$1,500,000 chemicals and plastics plant on a 10-acre tract on Lake Erie, near Painesville, O., to produce vinyl type synthetic resins . . . Northrop Aircraft will allow hourly-paid employees a paid vacation period from Dec. 24 to Jan. 1 in addition to the regular two weeks leave given personnel having a full year of service . . . Lockheed Aircraft expected to complete its war contract terminations by the end of June, with approved claims aggregating \$150,093,869 having been filed . . . Lear, Inc., has won a decision in the U. S. court of appeals in a patent suit charging infringement on its automatic radio direction finder . . . Auster Aircraft, Ltd., British lightplane manufacturer, has purchased between 150 and 200 Continental engines intended for installation in Auster planes—90% of which are slated for export . . . Currently producing 22 planes per day, Cessna Aircraft is one month ahead of its originally proposed production schedules for its two-place models 120 and 140.



Runways in Municipal Airport, Toledo, Ohio, are concrete, of 8-6-8 in. cross section—over 167,000 square yards.

Commercial plane on concrete apron at Municipal Airport, Wichita, Kansas. Concrete runways in background. This airport has over one million square yards of concrete paving.



Concrete apron and architectural concrete administration building at Municipal Airport, Jacksonville, Florida, which has over half million square yards of concrete paving.

Build Airports with Concrete to Insure Low Annual Cost

For all but the lighter traffic, concrete runways usually cost less to build than any other pavement of equal load-carrying capacity. They provide years of uninterrupted service with little maintenance expense or need for costly rebuilding.

For airport hangars, shops and passenger facilities concrete construction gives you attractive design with low maintenance expense. It minimizes fire hazards.

For paving or buildings, concrete gives low annual cost—the true measure of economy.

PORTLAND CEMENT ASSOCIATION

Dept. 7-65, 33 W. Grand Ave., Chicago 10, Illinois

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work



As far as flying goes
YOU CAN'T GO MUCH FARTHER



1 143 million miles of flying experience.



2 72,104 miles of routes.



3 2,750 Atlantic crossings—increasing daily.



Beginning July, new CONSTELLATIONS for B·O·A·C on the Atlantic

B·O·A·C

BRITISH OVERSEAS AIRWAYS CORPORATION

Your local travel agent is
 our local office. Reservations
 and information also
 at most airline offices or at
 B.O.A.C., 420 Madison
 Ave., New York 17, N. Y.

THE SPEEDBIRD ROUTES

Over the Atlantic . . . and Across the World

Battle of Sales Philosophy Shaping Up

Carriers Split Into Two Camps Over Issue of Luxury Passenger Service As Opposed to Day Coach Travel

By WAYNE W. PARRISH

THE GREATEST battle in sales and traffic philosophy in the history of air transportation is opening this summer and even the greatest of the airline experts can't predict the outcome.

The airlines are sharply split into two camps and interwoven into the divergence of views on sales and traffic are such acute problems as all-weather flying, traffic control, airport congestion, passenger fares, and the highly confused reservations systems.

As more and more equipment goes into service the conflict in philosophies will become more marked.

In one camp is American Airlines, whose board chairman, C. R. Smith, is introducing mass transportation methods into the business with an outright purpose of lowering fares and dispensing with luxury passenger service on high-density traffic routes.

In the other camp are all of the other airlines which are endeavoring to maintain the high-class passenger service with which the air transport industry has been identified since its inception. And in this camp are more than a few airlines that want to increase passenger fares.

Two Issues Dominate

In a sense the current conflict is divided between the "day coach" and the "Pullman" advocates. Another way of putting it is that the conflict is between the "anonymous" passenger and the "personalized" passenger, the latter meaning that each passenger is identified by name.

The divergence of viewpoints has come out strongly in the seating capacity of equipment now being used, as witness the survey conducted in the June 15 issue of *AMERICAN AVIATION* which shows DC-4's containing everything from 44 luxury seats to 60.

Several airlines have showed a tendency to follow American Airlines in packing in the customers with frequent schedules and subordinating such passenger service as fine meals. Eastern is using high-density seat arrangement and so is PCA. Yet neither line has gone the full way with American and only recently PCA has announced that it would install "flying chefs" to cook meals on steam tables for passengers—even providing passengers with menus. This plan takes PCA out of the mass transportation philosophy of C. R. Smith, who believes that passengers want to get to their destinations with frequent schedules and don't expect luxuries—and would rather pay less for plain day coach service.

Chicago & Southern Air Lines has gone to the luxury extreme with 44 seats, radio, receiver for every passenger, and many other niceties for the Pullman trade. The idea, of course, is to provide Pullman

luxuries for the day coach passengers. But whether luxury travel of this type can survive against American's all-out drive for lower fares is a big question.

The conflict in philosophy has a lot of airline executives worried, and it has taken its toll of industry traffic people. The resignation of Charles Rheinstrom, v.p. of American, can be attributed to a divergence of views on sales and service. But still deeper is the effect the battle will have on fares. Some airlines even now find that they need to charge higher fares, yet it is difficult to see how they can do so if they compete with the day coach service—unless the passengers themselves turn out to desire luxury service.

American's mass transportation drive is centered in the high-density traffic areas such as Washington-New York-Boston, and New York-Chicago. Anyone who has witnessed American's shuttle services can't help but be impressed by the strides it has taken to eliminate ticketing and checking-in red tape. There are hitches in the system so far, but American has been packing in the customers with day coach style, giving no passenger service or very little of it—but the customers don't kick and they are day coach people. Only the old-timers who are used to being called by name and who like the ham-and-egg breakfasts and steak dinners, are the ones who grumble. The new passengers don't seem to expect anything but transportation.



Sworn In—James M. Landis (left) was sworn in June 19 as a member of the Civil Aeronautics Board, replacing Chairman L. Welch Pogue, resigned. The oath of office was administered by Judge Harold M. Stephens, associate justice of the U. S. Circuit Court of Appeals of the District of Columbia. Landis was named new chairman of the CAB.

Yet American's philosophy can't be extended very well to purely local airline services—at least no one has worked out a fool-proof formula to date. It is one thing to pack in the customers on routes that can stand a flight every half hour or an hour, but quite another when traffic potential calls for a few flights a day with a lot of intermediate stops. Here the reservations system must be functioning well, and passengers booked as individuals, or there'll be empty seats somewhere along the line.

It is clear that American's philosophy is going to work havoc on some of its competitors if American forces a fare reduction. Yet it is too early to see what the full effect will be. United Air Lines, it is conceded generally, has maintained the best passenger service throughout the war and since, with Delta a close second. The long-haul passenger is going to expect certain comforts, or at least he is going to grumble if he is discomforted by the time he reaches his destination. All of this has quite a bearing on fares.

Bottlenecks Feared

And unless all-weather flying can really be attained by next winter, some of the airports in the eastern part of the U. S. are going to be pretty sad sights. High density traffic has to move; if it bottlenecks anywhere, there is trouble. Most experts don't believe all-weather flying can be fully attained by next winter, although some are optimistic enough to believe that many more schedules can be completed next winter than the last one.

Meantime the shortage of telephone circuits and reservations clerks have kept a lot of people from flying simply because they couldn't contact the airline. Inability to get confirmed connecting space has turned away a lot of business too. Every airline is busy brushing up its local offices to handle more business and to correct the sad under-estimates made by traffic men who didn't believe that the public would want to fly as much as it evidently does.

There is good reason for thinking that the number of passengers carried during July could be doubled if passengers could contact airline, and airlines could contact the passengers. Many passengers get discouraged after one call and consider air transportation quite complex and not quite worth the trouble—although they want to fly.

What has happened is that the public acceptance of air transportation developed far apace of either the airlines' ability to provide seats or the thinking of airline executives who didn't believe it could happen so soon. This doesn't mean that there aren't empty seats on many services and in many parts of the country. In those cases it is simply a matter of the lack of traffic potential, poor timing of services, bad connections, no service

to destinations desired, or lack of selling by the airlines. Chiefly it is the lack of potential, although there are still a lot of people who would like to fly who are shy of airlines in the same way that they were hesitant about making their first Pullman trip—they are afraid they will get mixed up and do the wrong things.

There is reason to believe that two classes of air service are definitely on the way. TWA has no trouble charging an extra fare on the Constellation. It also stands to reason that American Airlines, when its day coach-mass transportation plans are well integrated, will not overlook luxury service for the long-haul trips at higher fares.

Between New York and Washington are two railroads. By far the better service is the Baltimore & Ohio. But it operates one luxury train a day and a few others. The Pennsylvania shuns passenger service, herds its passengers like cattle, but has one or two trains every hour. The B. & O. does a minute fraction of the Pennsy's business, the latter being enormous.

Whatever the outcome, the industry is in the throes of a real revolution: It is a battle of service vs. no service, day coach frequency vs. personalized treatment, a battle of costs, fares and load factors. And the lines with 58 seats in a DC-4 can forget about the no-shows while the 44-passenger planes must be loaded for that all-important profit margin. The conflict is deep and fundamental. In its own way it is far more intense and challenging than any battle the railroads ever did have. And in the background is the conservative cry that maybe the present passenger demand won't hold up to fill all those seats on order.

Prepare Final Draft On State Aviation Act

The final draft of the proposed model State Aeronautics Commission or Department Act—a modification of the model act adopted at the National Aviation Clinic in Oklahoma City in 1944—has been prepared on the basis of agreements reached by the Civil Aviation Legislative Council on May 24.

This draft embodies the suggested changes which grew out of conferences between State and Federal aviation officials and industry representatives.

Under the title of Rules, Regulations and Standards in Section 12 is found the following language in subsection (B) which appears to fix the jurisdiction of State regulatory bodies: "No rules, regulations, orders or standards prescribed by the commission shall be inconsistent with, or contrary to, any act of the Congress of the United States or any regulation promulgated or standards established pursuant thereto."

Higher Fare Market Shows Preference For Air Travel

Airlines Make Spectacular Gains In Traffic Rivalry

By LEONARD EISERER

THE CERTIFICATED domestic airlines already have recovered the competitive ground lost to the Pullman Co. during the restrictive war years and are making steady, even spectacular, gains in passenger traffic rivalry with the surface carrier.

While the competitive peak will not be approached until both carrier types complete present extensive re-equipment programs, official reports filed by the airlines and Pullman with CAB and ICC, respectively, point up the decisive trend toward a greater airline share in the higher-fare passenger market.

Ten years ago, in 1936, the entire domestic air transport industry operated a total of 338,242,000 revenue passenger miles, or only 4% of Pullman's 8-1/3 billions. Each of the next five years found the airlines edging forward until in 1941 some 1,384,739,000 rpm. were flown over their skyways, for a prewar high of 13.7% of the Pullman figure.

Wartime conditions sharply reversed this course. While the airlines did manage to increase their traffic despite severe equipment shortages and general operating limitations, extensive troop movements and war-stimulated travel nearly tripled the Pullman volume. The result is reflected in an accompanying table which shows that the ratio of air revenue passenger miles to Pullman sagged to a low of 6.2% in 1943, or less than half the 1941 percentage.

The airlines partially regained their pre-war relative position last year when a better than 50% traffic increase over 1944, with Pullman losing a billion revenue passenger miles, lifted the percentage figure to 12.8%. Record air travel during the first quarter of this year boosted the air ratio to 15.5%, with a new high of 18.4% being reached in March. During that quarter, Pullman's revenue passenger miles increased only 7% over the same period a year ago, while the airlines, adding more equipment and new schedules as rapidly as possible, marked up a 64% gain in passenger traffic.

The airlines should continue to make substantial advances into the Pullman and railroad traffic market throughout the remainder of this year, and beyond. Airline revenue passenger miles approximating 25-30% of the Pullman total within the next six months to a year would not be surprising.

However, in another phase of air-rail,

competition—that of total revenues received from passenger traffic—the airlines have dropped slightly from prewar days. Reports for the first quarter of this year show only two of the major airlines ranking among the first 15 leading railroads in passenger revenues received. American Airlines, with \$10,613,000 in passenger revenues for the quarter, was in ninth place among the railroads, two notches lower than in 1941. United Air Lines, which held the 11th spot before the war, was 16th on the air-rail list for the quarter. These were the only two air carriers to place among the top 15 railroads, compared with three in 1941.

Main reasons for this change are the 10% boost in passenger fares allowed the rail carriers in 1942, and the cut in airline fare from approximately 5c to 4½¢ per mile.

Year	Domestic Air (000 omitted)	Pullman (000 omitted)	Ratio of Air to Pullman
1936	338,242	8,354,240	4.0%
1937	407,298	9,170,428	4.4%
1938	476,402	9,266,852	5.1%
1939	677,672	8,485,399	8.0%
1940	1,045,100	10,213,878	12.7%
1941	1,384,739	10,070,408	13.7%
1942	1,398,042	19,071,589	7.3%
1943	1,606,119	25,881,465	6.2%
1944	2,229,571	28,267,090	7.9%
1945	3,500,102	27,275,788	12.8%
1946 (1st quarter)	647,011	4,166,981	15.5%
1946 (1st quarter)	1,062,288	6,842,482	15.5%
January	328,893	2,563,744	12.8%
February	329,483	2,082,693	15.8%
March	403,912	2,196,055	18.4%

Air and Rail Leaders in Passenger Revenues

Ranked below in order of passenger revenues received during the first quarter of 1946 are the 18 leading passenger railroads and airlines. Comparable rank of these carriers for calendar year 1941 is shown on the right.

Jan.-Mar. Rank	Carrier	Pass. Rev. (in thousands)	1941 Rank
1.	Pennsylvania	\$57,823	1
2.	N. Y. Central	37,062	2
3.	Santa Fe	24,543	3
4.	So. Pacific	22,470	4
5.	Union Pacific	19,101	5
6.	N. Y., New Haven	18,533	6
7.	Southern	11,282	7
8.	B. & O.	11,068	8
9.	AMERICAN AIRLINES	10,613	9
10.	Chgo., B. & O.	9,441	10
11.	Chgo.	9,052	11
12.	Atl. Coast Line	8,787	12
13.	Rock Island	8,758	13
14.	Chgo. Milw.	8,262	14
15.	Illinois Central	7,996	15
16.	UNITED AIR LINES	7,894	16

Harris Resigns PCA To Head Detroit Sales Firm

Luther "Luke" Harris has resigned, effective July 1, as vice president-engineering and maintenance of Pennsylvania-Central Air Lines Corp., to become president of Aircraft Sales and Consultants Inc. of Detroit.

Harris, well-known in the industry, has been with PCA since the company was formed. He learned to fly in the Army in 1917, later flew the air mail for the government, and then worked with National Air Transport, Trans-Continental Air Transport, Ludington Air Lines, Bureau of Air Commerce and Lambert Aircraft Co.

PCA has made no announcement concerning Harris' successor.

May Fly Abroad

Military and civil airmen, stationed abroad, may receive certificates to meet their requirements from the CAA. American citizens who wish to purchase war surplus aircraft or engage in civilian flying are to benefit by the new ruling.



Terminal Under Construction—Between 3000 and 4000 persons are to be employed by National Airlines, Inc., when this new terminal is completed on a company owned tract, adjacent to the 36th Street International Airport, Miami. National has already moved its general and executive offices from Atlanta and all departments of the company are to find accommodations in the Miami headquarters, when ready for occupancy.

Claim Board Action Would Halt Unscheduled Operators

Institute Charges Airlines With Attempt To Monopolize

THE REACTION of the non-scheduled uncertificated air carriers to the important Civil Aeronautics Board rulings and proposals of June 5 affecting their future was becoming more apparent last week after a comparatively quiet period during which most operators were trying to figure out the exact meaning and scope of the Board actions.

With few exceptions, the reaction was that the rulings went much too far and that the long-range proposals, on which the Board called for comment by July 22, would put almost all of the operators out of business.

Most vociferous group was the Institute of Air Transportation, claiming to represent more than 70 "fixed base air carriers," as they have been termed by Brig. Gen. Lawrence J. Carr, IAT president. IAT wants no economic regulation of all-cargo carriers, and a liberal limit on passenger operators of 20 trips a month or 500 hours of flying between any two points. It also wants its members to be allowed to carry air mail and parcel post, claiming it can carry the former at rates making 3c air mail postage possible.

In addition to its strenuous objections, IAT accused the scheduled airlines of trying to monopolize the aviation field and of receiving "exorbitant and unfair" mail pay. Congressional inquiry into mail pay was asked. The lines also want permission to contract with railroads and steamship companies to carry traffic from their termini.

Confusion Exists

There was no doubt that considerable confusion still existed among many operators, who were trying to apply the CAB opinions in the Trans-Marine Airlines and Page Airways cases to their own individual companies. Both Trans-Marine and Page were found to be operating outside the present CAB exemption order covering non-scheduled carriers, and the Board said that its philosophy in these decisions would cover all similar cases.

(In addition to the Trans-Marine and Page cases, which deal with the present situation, CAB issued a proposed "long-range" revision of the exemption order, on which comment was asked by July 22. CAB divided non-scheduled carriers into two groups: Class A including carriers using any single aircraft unit having a gross weight in excess of 6,000 lbs. and a total weight exceeding 15,000 lbs.; Class B including all others. Under the proposals, carriers flying more than 10 round trips monthly between any two points would cease to be non-scheduled. In addition, the larger Class A carriers, while not required to get a CAB certificate, would be subject to certain provisions of the Civil Aeronautics Act.)

As far as the immediate future is concerned, general opinion was that the Board's Trans-Marine and Page opinions made it hard to operate within the law. But outside of a few scattered reports of small companies ceasing operations, there was no evidence that the industry was folding up. (Maryland Airlines, flying from Washington to the Delaware vacation coast, was one of the first to stop. It said it would await CAB action on its certificate application.)

It appears likely that the major force of CAB's regulatory effort will not be felt until it has had a chance to study the operations reports which non-scheduled carriers are now obliged to file. On the basis of these reports, it will endeavor to separate common carriers, contract carriers, etc., and further regulatory steps may then be taken. Some observers believe that in the case of apparent violations, CAB will issue warning letters before it takes any other legal steps.

Pertinent to the problem of regulation is the fact that CAB does not at present have a staff large enough to handle a heavy docket of regulatory investigations. It does, however, have the staff necessary to investigate flagrant violations of the exemption order, and five or six such investigations are believed to be in their preliminary stages although no formal action has yet been taken.

A number of operators have been coming to Washington to confer with CAB officials. Many of them appear somewhat confused as to just what they are legally permitted to do under the present regulation. Board officials emphasize that they are not permitted to advise the operators—they may only explain CAB's rules and let each carrier draw its own conclusions.

On the long-range proposals, IAT President Carr said it was the opinion of his members that these rules "would seriously curtail operations of the fixed base air carriers and make it impossible for most of them to operate profitably."

Makes Suggestions

IAT came in with some definite suggestions on CAB's proposals. It said that:

1. There should be no economic regulation (except on fair competition) of carriers transporting only cargo.

2. Passenger carriers transporting traffic from their "fixed base" to another point, or vice versa, should not be limited as to the number of monthly trips. Between other points, the limit should be 20 trips monthly or 500 hours of flying, whichever is greater.

3. A "fixed base air carrier" classification should be established, and before starting operations such a carrier would file a notice of intent to operate, giving the company's name, business place, services to be flown, etc.

4. Fixed base air carriers should be permitted to carry mail and parcel post.

IAT went further, however, and sent a resolution to President Truman, Congressmen and other interested parties, in addition to CAB, asking Congressional hearings to determine the recommendation of "fair and equitable" legislation for fixed base air carriers.

The scheduled airlines were accused by IAT of "attempting to monopolize the entire aviation field . . . not only in the fields of scheduled operations but also in the field of non-scheduled operations." Certificates issued to airlines did not contemplate the "transportation of air freight as such," it claimed, adding also that the airlines receive "exorbitant and unfair" rates for carrying the mail.

IAT asked that a Congressional committee consider the advisability of "investigating present air mail contracts with a view to canceling the same and establishing a complete revision upon fair and equitable rates and permitting the allocation of new contracts to fixed base air carriers."

Form Freight Group

Three of the largest contract air cargo carriers on June 24 announced formation of the Independent Airfreight Association, Inc., "to serve the mutual interests of airlines engaged exclusively in carrying freight and to foster regulation in the public interest."

President of the association is Robert A. Prescott, chief executive of National Skyway Freight Corp. Trustees are Prescott, Earl F. Slick, president of Slick Airways, and Harry R. Playford, president of U. S. Airlines.

Whether the association's present membership included companies other than the three mentioned was not indicated. Prescott said cargo carriers would ask for immediate recognition as common carriers through a classification under the Civil Aeronautics Act.

These companies would operate under such a license until the CAB establishes the basis for permanent regulation and issues certificates of convenience and necessity to carry air freight exclusively.

Pending the outcome of such investigation, these carriers should "be permitted to contract with the railroads and steamship companies for the transportation of mail, passengers and/or cargo to and from the various termini of such railroads and steamship companies wherever the termini of the . . . companies are within or meet the area of the fixed base air carriers."

In contrast to IAT was H. Roy Penzell, president of Air Cargo Transport, large contract cargo carrier, who asserted that his company, far from fighting CAB rulings, would welcome "sound and equitable" regulations by the Board. Obviously referring to IAT, Penzell denied that any association was empowered to speak for his company.

Wayne M. Weishaar, secretary of Aeronautical Training Society, which includes among its members some of the smaller fixed base operators, said CAB's long-range proposals raise the question of whether aviation will be best advanced in an "era of pioneering and experimental growth by non-scheduled carriers" or whether much of the future potential should be left in the hands of the scheduled airlines. "Whether non-scheduled aviation can survive and grow with a limit of 10 round trips a month between designated points and whether it can pay big airline pilot wage scales are the major issues," he said. "The outcome will undoubtedly go far in determining whether 18 carriers or 1,800 are to have a piece of the sky."

Among the first opinions expressed on Capitol Hill was that of Rep. Carl Hinshaw (R., Calif.) who stated that CAB should keep in effect, at least for the time being, its exemption order as far as transportation of cargo by air was concerned. Hinshaw said he felt CAB should differentiate between passenger and cargo carriers. Restrictive regulation now, while non-scheduled air transportation is in its infancy, might prove later to have been contrary to the public interest, he said.

The Military Pilots Association, Miami, Fla., voiced "strenuous" objection to the CAB's proposed regulation, which it said would "exterminate 95% of the charter airline companies operating in this country."

Want a Weekend in Europe? It's Easy by Air, Parrish Finds

By W. W. P.

I'm a sucker for advertising. The ads said "Fly to Europe for the Week-end." I believed them. British Overseas Airways Corp. said "Come along and try it." I did. And it worked. I spent a fine week-end in London.

It was on a Thursday evening that the suggestion came forth at a reception given for Major J. R. McCrindle, deputy director-general of BOAC, and the Atlantic director, Vernon Crudge. It took me at least two and a half minutes to pack an extra shirt and my shaving kit.

Actually I had all day Friday to clean up some work and get my passport amended (which was an all-time record for the Department of State) and I even went to the office Saturday morning to take care of the first mail. American Airlines hauled me to New York on a DC-4, and I had a pleasant meal looking at airplanes (what a novelty!) from the terrace restaurant at LaGuardia.

We took off from LaGuardia at 3:25 p.m. EST in a Lockheed Constellation called the Balmoral. It was a proving flight, the first BOAC Connie to go as far as the new London Airport at Heathrow, and on board were Messrs. McCrindle and Crudge; Peter Masfield, British civil air attache, some Lockheed personnel, a double crew, a few other guests and some spare parts.

This was on June 15 and there were very favorable winds eastbound. We climbed at once to 21,000 feet and stayed there the whole way across. The Connie is very comfortable despite the engine noise in the first few seats (to be corrected in time) and our pressurized cabin worked amazingly well without any such unfortunate incident as the PAA affair in Connecticut.

Boston was passed in 40 minutes, and Halifax in 2 hours and 15 minutes.

BOAC's chief steward on the Atlantic division, Bill Smithers, a very capable Joe, kept the fruit juice, tea, tidbits, and deluxe dinner coming in proper sequence (It's amazing how much one can eat in flight), and after several hours of sleep, we sighted land on Bristol Bay and soon touched ground at Heathrow. It was so fast and so easy it astonished me. It easily was the best of the 8 air crossings I've had.

The time was 11 hours and 24 minutes from takeoff to landing for the 3520 miles, the fastest nonstop flight from New York to London with a commercial airplane. I've never spent a shorter night—it was only a few hours from sundown to sunup at the rate of 310 miles per hour eastbound.

It was early Sunday morning and out to meet the plane by advance notice was Jim Stanton, AMERICAN AVIATION representative and Livingston Satterthwaite, the U. S. civil air attache based in London.

Heathrow (or London Airport as they choose to call it now), has two runways ready and one of them, 10,000 feet, is a honey. It's very smooth. The airport is quite close to the city on the west side. No buildings have been erected so there is a tent city, a rare sight for an international airport, and passengers duck under the flaps into a lounge and then on to health, immigration and customs, and then another lounge where coffee and tea are served. One walks on a heavy matting. The atmosphere on a clear day is that of a garden party, but I understand that on rainy days it leaves something to be desired. Temporary buildings are supposed to go up soon. So long as one plane-load is handled at a time, there will be no confusion in the tents, but the traffic density of LaGuardia would cause a riot.

In two full days and a night one can

pitch a lot of breeze in London and find out what's going on. Sol Voorhees, Lockheed's irrepressible European sales manager, was ensconced in all his glory at the Savoy and was full of news and optimism. Bob Ruddick, United Air Lines' representative for Europe, had lost 24 pounds in 3 months and had paid \$4.80 for six peaches and was slowly starving to death, but had enough caloric energy left to describe the difficulties he's having in opening up an office. The TWA office on Regent Street is quite a splendid affair, or will be when the carpenters and painters get finished, and is probably the most handsome ticket office built along U. S. lines in the British capital.

Luncheon with John Henry and John Brancker of British European Airways brought forth many plans for spider-web air service from London to all points in Europe, and as soon as Parliament finally passes the new air transport act, BEA can get started on a permanent basis. It will absorb all internal services in the U. K.

A cocktail party given by Lord Knollys, chairman of BOAC, and attended by such top officials as Sir Henry Self, of the Ministry of Civil Aviation and Sir Harold Hartley, who is chairman-designee of BEA, ended the two busy days, and we took off at Heathrow at 10 p. m. for Shannon, at which point everyone on board pounced out to get their teeth in a good steak. Even two days in London makes one hungry; the food shortage is worse than it has ever been.

Rineanna is Superior

Rineanna Airport at Shannon, Eire, has definitely superior facilities for handling and feeding passengers. The dining room is tastefully decorated, the best of any airport in the world I've ever seen, and the restaurant has 220 employees which gives some idea of the 24-hour service maintained. Some 1700 meals are served per day for international airline passengers, plus 600 on-board lunches.

It was a pleasure to meet Michael J. Toomey, traffic supt. for Aer Lingus, which acts as agent for most of the airlines there. Red-headed, tall, with cigaret rolling back and forth on his lips, Toomey is typically Irish. He has a staff of 91 now and 40 more are to be added. Shannon is a big show, and a very good one. The lounge is comfortable, warm and spacious and the bar is quite good.

The flight from Shannon to Gander required within ten minutes as much time as we took to fly from New York to London. The headwinds were pretty tough. Gander is a sight, too, up there in the wilderness of Newfoundland. The food is good and the sleeping accommodations (which are being used with some frequency) are modest but adequate. The Newfoundland government is remodeling a new set of RCAF facilities which should be fine.

From Gander to La Guardia was a battle against weather, but I managed to get to my office in Washington by 7 p.m. Tuesday, a few hours behind schedule. I had been just 72 hours, almost to the minute, out of New York on the London trip and had had quite ample time there for brief visits.



At Start of Record Flight—The BOAC Constellation "Balmoral" which made the record New York-London nonstop flight of 11 hrs. 24 minutes, shown at LaGuardia Airport before take-off June 15. Sixth from right, front row, is Capt. G. R. Buxton. Continuing to right are Capt. W. S. May, who piloted the plane; Vernon Crudge, director of Atlantic division; Major J. R. McCrindle, deputy director-general of BOAC; Paul Bewshea, New York manager, and Wayne W. Parrish, editor of American Aviation. In back row, extreme right, are respectively Peter Masfield, British civil air attache to U. S., and Tim Morrissey, BOCA manager at LaGuardia. Jack Carley, of Cecil & Presbrey, New York advertising firm, is fourth from left in back row. Others are special guests, crew members and Lockheed personnel.

Air Transportation For Navy Personnel Proposed

Better For National Defense And Cheaper is NATS Claim

By FRED HUNTER

THE NAVAL Air Transport Service has proposed to the Navy Department that all service transient personnel be transported by air not only for better national defense, but because it is cheaper.

Backing up the recommendation made by Rear Admiral J. W. Reeves, Jr., commander of the NATS, is a statistical study prepared by the National Air Transport Service analyzing the cost economies of air as compared to surface transportation and outlining its many advantages.

Highlighting the report are the following figures on Navy personnel traveling west by surface from San Francisco during the period April 4, 1946 to May 4, 1946:

	Man Days Surface	Man Days By Air	Man Days Saved by Air
Officers	3,798	477	3,321
Men	2,012	2,773	2,361
Total	5,810	3,250	2,561

With a peacetime Navy of 500,000, the NATS report estimates that the total personnel in a travel status for all reasons will be approximately five per cent. Air transportation would reduce the lost time 50 to 75 per cent.

Payroll costs alone make air transportation cheaper for the taxpayer, the report points out in tables compiled to show the comparative costs of travel by air, rail and ship for grades running from petty officer second class to captain. The savings counting fare and pay, run from 0.37 cents per mile for the petty officers second class to 4.06 cents per mile for captains.

Still further savings would be accomplished by taking into consideration such items as per diem allowances for officers and time lost waiting for ship transportation.

For peacetime air transport, the NATS report suggests a combination of commercial and military air transport, depending in a large measure on the commercial carriers, but maintaining the

nucleus of a military service just large enough to permit efficient and rapid expansion in case of future emergency.

It reasons that sole dependence on commercial carriers would not be satisfactory without priority control and also that in case of future war it would result in repetition of the mistakes of the last war when the military service stripped commercial operators of their personnel and equipment. On the other hand, the report says sole dependence on military air transport would impose an unnecessary burden on the taxpayers.

Morale, if nothing else, justifies the use of air transportation, according to the study. It relates that experience has proven that morale of troops stationed overseas is almost exactly proportional to the speed and regularity of the transportation available to the United States. With adequate air schedules, no man in any base or station will be more than 60 hours from home. Men granted emergency leave should in all cases have air transportation available to their destination and all first class mail to overseas should go by air because surface transportation is too slow and too infrequent, the report says.

The report also recommends wide expansion in the shipment of cargo by air and advocates the use of air for items valued in excess of \$5 per pound.

In July, 1945, at the height of the war in the Pacific, the average time from date of requisition to date of delivery was 183 days by surface, 30 days by air. Thus stockpiling in excess of six months supply was required in items like aviation spares. A six per cent savings in this stockpile would absorb the total air shipment cost, the report reveals, and adds that it is plain that even greater savings could be expected because replacements by air would arrive six to eight times faster than by surface.

Moreover, in such items as aircraft instruments, radar, radio and other precision gear, it is pointed out that breakage due to rough handling in surface



Offer New Service—C. E. Woolman, (right) President of Delta Airlines looks on while E. Lee Talman, TWA v. p., signs an equipment interchange agreement to be approved by CAB. Service would permit passengers flying from Detroit to Miami and other southern points, to remain on the same airplane for the entire trip.

transit has been figured at five per cent plus. Breakage in air transit is a small fraction of one per cent. In other words, breakage on this type of material in surface shipment exceeds \$85 per hundred pounds. This is several times the cost of shipping the material by air.

The report urges the study and development of new designs of air transport equipment for cargo purposes and also the redesign of all cargo other than raw material to make it more suitable for transportation by air. The Naval Air Transport Service has recommended to the Chief of Naval Operations that action be taken to assign a bureau or other unit of the Navy Department to the project.

Consider Reorganization Of Vital ATA Department

Reorganization of the Government Affairs Department of the Air Transport Association was to be considered at a special meeting of the Government Affairs Committee to be held in Washington on June 28. Harry Meixell is director of the Government Affairs Department.

In his notice to the committee membership, Robert Ramspeck, Executive Vice President of ATA, stated that some questions have been raised as to the functioning of the Government Affairs Department. This, according to one airline official, brings out into the open for the first time some agitation for reorganization which has been brewing in certain airline circles for the past several months. Dissatisfaction it is understood, centers about the functioning of the department in the handling of aviation matters in state legislatures and the organization and work of the state and local committees.

Committee members were told that the entire future of the Government Affairs Department would be considered with the idea of determining whether the committee shall make any recommendations of changes to the officers and directors of the Association.

COMPARATIVE COSTS OF AIR, RAIL AND SHIP

These are the figures prepared by the statistical department of the Naval Air Transport Service to show the comparative costs of air, rail and ship travel, based on fares charged by the airlines, the railroads and first class sea fares on the Atlantic and Pacific:

COMPARATIVE COSTS OF TRAVEL AIR & RAIL							
RAIL TRAVEL				AIR TRAVEL			
Rank or Rate	Payroll Cost Per Mile	Fare Per Mile	Total Per Mile	Payroll Cost Per Mile	Fare Per Mile	Total Per Mile	Savings By Air Per Mile
Capt.	2.38c	5.1c	8.48c	0.43c	4.8c	5.23c	3.25c
Comdr.	2.92c	5.1c	8.02c	0.37c	4.8c	5.17c	2.85c
Lt. Cdr.	2.98c	5.1c	7.66c	0.32c	4.8c	5.12c	2.54c
Lieut.	1.92c	5.1c	7.02c	0.24c	4.8c	5.04c	1.98c
Lt. (Jr)	1.60c	5.1c	6.70c	0.20c	4.8c	5.00c	1.70c
Ens.	1.39c	5.1c	6.49c	0.17c	4.8c	4.97c	1.52c
P.O.	1.18c	5.1c	6.28c	0.15c	4.8c	4.95c	1.33c
P.O. 1c	0.98c	5.1c	6.08c	0.12c	4.8c	4.92c	1.14c
P.O. 2c	0.82c	5.1c	5.92c	0.10c	4.8c	4.90c	1.02c

COMPARATIVE COST OF TRAVEL SEA & AIR							
SEA TRAVEL				AIR TRAVEL			
Rank or Rate	Payroll Cost Per Mile (1)	Fare (2) Per Mile	Total Per Mile	Payroll Cost Per Mile (1)	Fare Per Mile	Total Per Mile	Savings By Air Per Mile
Capt.	5.32c	4.88c	10.20c	.44c	5.80c	6.24c	4.06c
Comdr.	4.63c	4.88c	9.51c	.39c	5.80c	6.19c	3.42c
Lt. Cdr.	4.07c	4.88c	8.95c	.34c	5.80c	6.14c	2.81c
Lieut.	3.07c	4.88c	7.95c	.26c	5.80c	6.06c	1.89c
Lt. (Jr)	2.55c	4.88c	7.43c	.21c	5.80c	6.01c	1.52c
Ens.	2.20c	4.88c	7.08c	.18c	5.80c	5.98c	1.20c
P.O.	1.85c	4.88c	6.73c	.15c	5.80c	5.95c	.88c
P.O. 1c	1.53c	4.88c	6.41c	.13c	5.80c	5.93c	.68c
P.O. 2c	1.30c	4.88c	6.18c	.11c	5.80c	5.91c	.57c

Note: Per diem not figured in these costs.

Submit Proposal To Reduce North Atlantic Air Fares

New Rates To Be Effective Ten Days After Approval

By ERIC BRAMLEY

REDUCTIONS in North Atlantic air passage fares averaging about 12.5% were proposed last month by the North Atlantic Traffic Conference of the International Air Transport Association. The proposals were submitted to the governments involved for their approval.

The fares, which average 9.5c per mile, are lower than those which were submitted to the governments last March and which the U. S. Civil Aeronautics Board refused to approve because they were not based on operating costs. The March fares averaged about 10.4c per mile. The new proposals become effective 10 days after approval of the governments and remain in effect for six months or until Feb. 28, 1947.

The IATA conference proposes to cut the New York-London fare from \$375 to \$325 one way, a reduction of over 13%. Biggest cuts were made in fares to Scandinavian points, with New York-Stockholm dropping 18% from \$495 to \$405; New York-Oslo from \$470 to \$388 and New York-Copenhagen from \$465 to \$386. Only two rates would be higher: New York-Shannon is proposed at \$292, which is higher than Pan American Airways' present \$240 but lower than other lines' \$334; New York-Lisbon would be \$331, compared with PAA's \$295 and the other lines' \$375.

As was the case in March, Pan American refused to vote on the conference proposals. Under IATA procedure, however, a member present but not voting is considered to have voted affirmatively.

John E. Slater, chairman of the board of American Overseas Airlines and chairman of the conference, said that the proposed new fares were based on low estimates of costs. The estimates were based on expected operations by the end of 1946 of 100 North Atlantic trips weekly by the airlines involved, making 500 seats available to Europe daily. Load factor of 65% was reflected in the rates and it was expected that plane utilization would be nine to 10 hours daily.

The "gateway" principle was retained in the tariffs. Thus, the trans-Atlantic fare consists of the fare between the gateways (Boston in the U. S., and Shannon, Prestwick, Lisbon and Oslo on the European side) plus the lowest domestic fare on either end.

Also proposed is a reduction on round trips of 10% on that portion of the trip between the gateways. Thus New York-London round trip fare is \$586.70. Stop-over privileges will be granted on through tickets.

Cargo rates will be eight-tenths of one percent of the one-way passenger fare

per kilogram (2.2 lbs.). For example, New York-London will be \$1.17 per lb., New York-Lisbon \$1.20 and New York-Paris \$1.25.

Ten percent of the adult rate will be charged for children under two years of age, and 50% for children from two to 12. Baggage allowance will be 66 lbs. per passenger.

Establishment of a permanent cost committee, which will continue cost studies and submit reports, was agreed upon by the conference.

Voting members of the North Atlantic Conference are American Overseas Airlines, TWA, British Overseas Airways Corp., KLM Royal Dutch Airlines, Pan American Airways, SIDA Swedish Intercontinental Airlines and Trans-Canada Air Lines. Also present but not voting were Air France, DDL Danish Airlines and DNL Norwegian Airlines.

Emergency Board To Recommend In Pilot Pay Dispute

The President's Emergency Board, appointed to hear the dispute between TWA pilots and management over wages and hours involving the operation of four-engine aircraft, will report its recommendations July 7, Judge George E. Bushnell, Michigan Supreme Court Justice and chairman of the Board announced.

As this was written, the Air Line Pilots Association, led by its president David L. Behncke and the Board, were engaged in discussion and argument as to whether the cases of the other 12 airline members of the Airlines Negotiating Committee should be heard concurrently. When ALPA stated there was no dispute involving pilots and the other 12 airlines, the Emergency Board offered to serve as mediator in trying to get pilots and management together on contracts involving the operation of four-engine equipment on the other 12 airlines.

During the closing session on the TWA case, Behncke and William E. Stevenson, counsel for the Negotiating Committee, engaged in some spirited exchanges. Behncke said that despite assertions that larger, heavier and faster planes would not lead to unemployment of pilots, TWA recently had laid off 175 men.

Replying for TWA, Stevenson said these 175 men had been hired as copilots when it appeared that the company could get delivery of new planes, that failure to get them on schedule had resulted in temporary pilot furloughs.

Aviation Calendar

July 12-Aug. 11—Aviation show in connection with Centurama Celebration, Milwaukee.

July 15-16—Annual NAA Airport Users Conference, Milwaukee.

July 18-21—World's Fair of Aviation, Omaha.

July 18-19—IAS National Annual Summer Meeting, Royce Hall, University of California at Los Angeles.

July 19—Organization meeting Flying Farmers of Minnesota, U. of M., St. Paul.

July 19-20—NAA National Convention, Omaha, Neb.

July 20-21—Mansfield, O., Municipal Airport dedication and "Sky Show."

July 26-27—NAA Joint Private Flying Conference, Milwaukee.

July 29-30—NAA Joint Air Youth Training Conference, Milwaukee.

July 30—IATA European-South American route conference, Paris.

Aug. 1-3—National Flying Farmers' Association first annual convention, Oklahoma A & M College, Stillwater, Okla.

Aug. 3-18—National soaring contest, auspices National Soaring Society, Elmira, N. Y.

Aug. 2-4—Observance of 20th anniversary of air passenger service, Grand Rapids, Mich.

Aug. 21-23—World Congress on Air Age Education sponsored by Air Age Education Research, International House, New York.

Aug. 22-24—SAE National West Coast Transportation & Maintenance Meeting, New Washington Hotel, Seattle.

Aug. 24-25—Denver International Air Show, Denver, Colo.

Aug. 30-Sept. 7—International Air Show, de Havilland Airport, Toronto, auspices National Aeronautical Association of Canada, 409 Confederation Life Bldg., Toronto.

Aug. 30-Sept. 2—National Air Races, Cleveland, O.

Sept. 4-12—St. Louis Indoor Air Fair sponsored by Aviation Council of Metropolitan St. Louis.

Sept. 17—IATA Western Traffic Conference, Rio de Janeiro.

Oct. 3-5—SAE National Aeronautics (Fall) Meeting and Aircraft Engineering Display, Biltmore Hotel, Los Angeles.

Oct. 4-13—Annual Air Show sponsored by Aircraft Industries Association, Cleveland.

Oct. 14-17—National Aviation Clinic, Oklahoma City.

Oct. 16-17—SAE National Transportation & Maintenance Meeting, Hotel Knickerbocker, Chicago.

Oct. 23-25—Second Annual Arizona Aviation Conference, Phoenix.

Oct. 24—IAS National Air Transport meeting, Statler Hotel, Washington.

Oct. 29—Annual meeting International Air Transport Association, Cairo.

Nov. 7-8—SAE National Fuels & Lubricants Meeting, Mayo Hotel, Tulsa, Oklahoma.

Dec. 2-4—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago.

Dec. 12-15—International Aviation Celebration, El Paso, Tex., auspices Chamber of Commerce.

Dec. 17—Tenth Wright Brothers lecture, New York, auspices IAS.

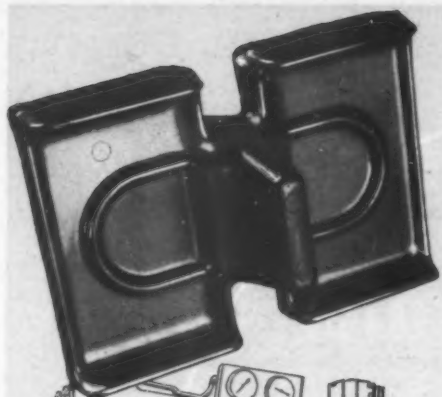
Jan. 10-11, 1947—15th Annual All-American Air Maneuvers, Miami.

Jan. 11-16, 1947—Aviation of Tomorrow Exhibit, Miami.

Jan. 23-30, 1947—Fifteenth annual meeting, IAS, New York.

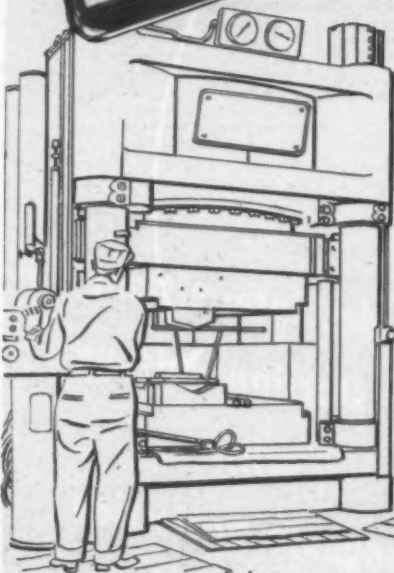
Proposed IATA Fares

AND	Between	BOSTON		NEW YORK		WASHINGTON	
		Present	Proposed	Present	Proposed	Present	Proposed
Amsterdam	\$390	\$348.68	\$399	\$357	\$408.60	\$367.05
Brussels	390	340.88	399	349	408.60	359.05
Copenhagen	456	377.68	465	386	474.40	396.08
Geneva	400	344.88	409	373	419	383.08
Lisbon	394	322.88	378	331	388	341.08
London	366	316.88	378	338	388.05	338.08
Madrid	410	368.88	419	379	429	383.08
Oslo	461	379.88	470	388	479.40	398.08
Paris	364	346.88	378	346	385	351.05
Rome	462	419.88	471	424	481	434.08
Shannon	328	283.68	334	292	344.05	302.08
Stockholm	486	396.88	495	405	504.40	415.08



**in modern plants
that forge magnesium**

they're forging soundness!



For jobs where stressed parts need lightness, it's magnesium they're forging today. This daily practice in up-to-date shops is turning out strong, lightweight forgings that are exceptionally sound! Good fatigue strength is a feature of magnesium forgings—essential for parts that must stand repeated stresses. Their soundness is the quality that counts in applications that call for pressure tightness. In short, magnesium gives you all the advantages of forging—plus lightness unmatched by other structural metals. There's a wide variety of magnesium forgings now in general use. Applications include many such parts as aircraft engine bearing caps, bearing housings, hinges, engine mountings, valve and pump bodies, control levers, brackets, and fittings. For full and detailed information, contact the nearest Dow office.

*Ready
to make products move!*

MAGNESIUM

LIGHTEST OF ALL STRUCTURAL METALS



Dow's ample supply of magnesium includes forging alloys prepared for superior properties and desirable characteristics.



Modern facilities for forging magnesium are available in Dow's shops and those of many independent fabricators.



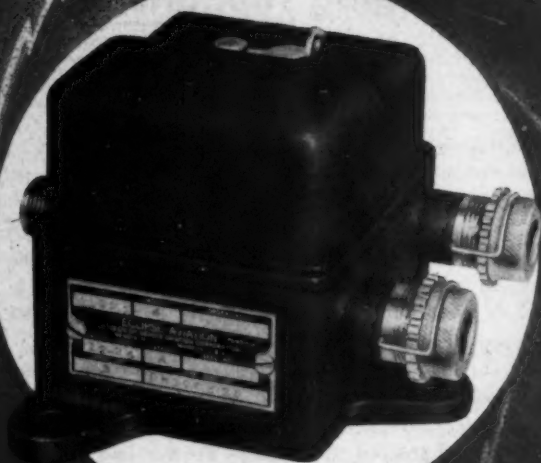
Magnesium forgings of many kinds are finding successful application in diversified fields where lightness is a factor.



MAGNESIUM DIVISION • THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

Eclipse Low tension Vibrator Coil



Provides intermittent
high starting voltage
with
magneto protection

The Eclipse* Low Tension Vibrator Coil is an essential element of an aircraft engine starting system. It provides high magneto voltage during cranking period. An outstanding feature is the magneto protection it provides by grounding excessive current through an additional winding, in the event of frozen contacts. Lightweight, simple and rugged in construction, it operates with a maximum current drain of $3\frac{1}{2}$ amperes. Can be used in either 12 or 24 volt systems.

*REG. U.S. PAT. OFF.

Eclipse
AVIATION ACCESSORIES

... REPAREMENT SERVICE FOLLOWS
THROUGH FROM DRAWING BOARD TO SKY

Bentley
AVIATION CORPORATION

Eclipse-Pioneer Division • Teterboro, N. J. • Los Angeles 36, Calif.

— International Air Transport —

(Printed by AMERICAN AVIATION as a service to the aviation industry, with the permission of World Review, London, in which the article was originally published).

By SIR WILLIAM P. HILDRED

Director General, International Air Transport Association

WHEN NOAH was watching the animals going into the Ark two by two, he no doubt felt superior as he looked along the queue and noticed the wart-hog chattering in an undertone to his missus, the duck-billed platypus, the patient cow, the kangaroo with empty pouch, the elephant and all the other beasts. He no doubt thanked God that he was not as they were and yet he would have saved his descendants much trouble, irritation and bloody war if he had in some material particulars behaved like the beasts of the field. Throughout the years they, at least, have preserved, unscathed, the simple speech with which God had seen fit to endow them. The seagull may not have the vocabulary of Shakespeare but, at any rate, the seagulls on the pier at St. Ives can hold a conversation with the seagulls on the docks at Halifax, Nova Scotia, and with the seagulls at Bermuda or any other part of the world where they happen to live without the slightest difficulty.

But the descendants of Shem & Cham have hidden themselves behind mountains and hills, across the desert wastes, round the water-courses and mighty rivers of the world and have carefully grown away from each other so that in language, manners, customs, morals, law, conventions, currency, education, clothes, health, no living man can comprehend them all; and at present, no man desiring to fly like a bird across the world can do so without signing innumerable forms, using the paid offices of lawyers, accountants, customs and immigration clerks, medical men, without driving himself crazy with the petty minutiae of parish-pump politics, sensibilities, vanities, phobias and what not.

If my ubiquitous friend, Tommy Tittlemouse, a nice fellow, wants to go across the world to see his mother, can he fly like an eagle or a seagull with flashing eyes at flashing speed? Not at present, he can't; he leaves a silver trail like a slimy slug and when he's done his trip, if he survives it, a thousand little men at all the frontiers can point proudly to an imperishable record that Tommy was at their barrier on such and such a day and somewhere else the next. Who cares? But it is not right that Tommy should be so beset by delay-action at every point in his travels.

Bless, therefore, the name of anything which has INTERNATIONAL in its title. In twenty-five years the tendency has been to regard anything international as impersonal, impotent, sterile, non-national and, therefore, not interesting or important. And yet, the next step in world progress is to develop international co-operation; and in no sphere is this more exciting, more necessary, more friendship-forming than in the air. So when you see I.A.T.A. pray read on to discover, if you didn't already know, that I.A.T.A. stands for International Air Transport Association. This is a recently formed association of airline operators, financed by its member companies and self-supporting. It does not receive any money from any Government in the world and yet it serves all the governments of the world who desire its service. Its aims and objects are to promote safe, regular and economical and interesting air transport for all the peoples of the world; to foster the development of air commerce and to study the problems connected with this new and important topic; to provide efficient machinery for collaboration among all air transport operators who are engaged directly or indirectly in international air transport service; and to co-operate with the International Civil Aviation Organization and other international bodies. Its main contract is with P.I.C.A.O., a body representative of Governments—a sort of aerial U.N.O. which was set up as a result of the Chicago Civil Aviation Conference of 1944.

Although in its present form I.A.T.A. dates only from April 1945, when its Articles of Association were approved by a conference of operators at Havana, it is not a wholly new conception. It is the successor to the old International Air Traffic Association at The Hague, which, from 1919 to the temporary disruption of civil aviation by the recent war, did sterling work in securing uniformity of procedure as between nations in traffic handling, technical and legal matters. The old International Air Traffic Association has now been liquidated, but the value of its work and its memory remain. Its documents and records have been handed over to the new body, and several members of the present IATA Executive Committee—Mr. Rene Briand of Air France, Major J. R. McCrindle of BOAC, Mr. P. A. Norlin of ABA, and Mr. A. Plesman of KLM were serving in 1939 on various Committees of the first IATA.

Any air transport enterprise is eligible for active membership of IATA if it operates a scheduled air service under proper authority in the transport of passengers, mail or cargo for public hire between the territories of two or more States, under the flag of a State eligible for membership in the International Civil Aviation Organization. This means virtually a world-wide membership, with the present exception of ex-enemy States. The U.S.S.R. is not yet a member of P.I.C.A.O. or I.A.T.A. The international character of the Association is thus twofold; it is international both in its membership and in the activities of its members. Domestic airline operators of the "ICAO" States may, however, join as associate members if they desire to do so. They pay a lower subscription than the active members; they have no voting powers but they can participate to a limited extent in the activities of the Association. There are at present forty-eight

active and thirteen associate members. Several additional applications for active membership will soon be considered by the Executive Committee.

So large a membership must clearly work through smaller units, and the direction of IATA is therefore centralized in its Executive Committee, consisting at present of twelve persons. Each member is chosen from one of the active members of the Association and they all serve without remuneration. They retire one third each year. The President of IATA holds office for one year only. The present President is Mr. H. J. Symington, K. C., head of one of our founding airline companies, Trans-Canada Air Lines, Montreal, and the next president is to be Hafez Afifi Pasha, MISR Airlines, Cairo. President and members of the Executive Committee are elected by the active members of the Association at its annual general meeting, at which time the Committee also presents for the Association's approval its budget for the succeeding year.

This set-up, of course, broadly follows the familiar democratic model of Parliament and Cabinet. To complete the machinery of government, there must be something analogous to the civil service, and this is provided by the Head Office Secretariat at Montreal, a small full-time staff consisting of the Director General, Secretary, Treasurer and other officials. The Director General, Secretary and Treasurer are elected by the Executive Committee. It is the Secretariat that provides the necessary core of continuity and liaison; it collects subscriptions, maintains records, keeps members in touch with the Association's proceedings by disseminating information; it organizes meetings; carries out the secretarial work for the various committees and sub-committees of IATA and arranges for the co-operation of IATA with the central and regional work of P.I.C.A.O.

The Standing Committees are of great importance, because it is through them that most of IATA's creative work is done. They are four in number: Financial, Legal, Technical and Traffic, each again dividing into working committees and sub-committees as necessary. The Executive Committee, the policy-making body, keeps a close watch over their activities; it appoints their members; it determines their duties; it approves their rules of procedure; and it receives reports of their actions and decisions, which, of course, have no effective status until approved by it. The present Chairman of the Executive Committee is Mr. John E. Slater, Chairman of the Board of American Overseas Airlines.

Between them, these four Committees cover an extremely wide range of subjects.

The Financial Committee concerns itself with all financial matters connected with air transport: standardization of methods of rendering, verifying and settling accounts for revenue transactions as between members; clearing house problems; insurance questions; introduction and control of international monetary documents (e.g. travellers' cheques and letters of credit); and statistical matters. The Legal Committee deals generally with legal matters having a bearing on international air transport, particularly with international conventions on public and private air law, and on other means of transport; conflicts of law; and arbitration. The Technical Committee, ranging over the whole field of international air transport technicalities, handles operational matters; the promotion of safety and efficiency in flight; standardization of equipment; wireless; meteorology; maintenance of aircraft; airports and airport procedure. The burden on its back during the next thirty months starting with all the technical developments wrought by seven years war and seven years scientific thinking is terrific; and it must work fast in order to secure uniformity before the flood sets in. The Traffic Committee, concerning itself with all international air traffic matters involving passengers, cargo and the handling of mail, studies, in particular, the principles involved in the fixing of tariffs, rates and schedules; general conditions of carriage; traffic forms, documents and procedures; reservation codes and procedures; Government forms, regulations and procedures; ethics of advertising and publicity; and all matters pertaining to agents.

This Committee has a particular interest at the moment, since one of its tentative functions recently caused some stir in the political world. This is the innocent-looking provision that it shall concern itself with the principles involved in the establishment of tariffs and rates. At the first annual General Meeting held in Montreal in October last a resolution was adopted constituting nine regions on a geographical basis, each of which was to have its own Conference of air transport operators, within the framework of the Association. Every IATA active member operating in a particular region belongs to a Conference which studies, discusses and seeks to secure agreement on an equitable basis upon the rates to be charged in that region. This is a condition of membership of the Association; and there are other rules the effect of which is that no member by abstaining from voting on questions brought before the Conference is less bound than the others.

The practical arrangement presents some difficulties for the United States operators, for their legislature, deeply impressed with the evils of that monopoly system which, paradoxically, seems to be the logical outcome of unfettered competition, has made it an offence for them to fix a rate by agreement with their fellow-operators. After much

anxious and prolonged negotiation between representatives of the Government of the United States and the United Kingdom, amidst the croton trees and banana groves of Bermuda during January and February of the present year, it was provisionally agreed that American operators should have a dispensation for the experimental period of one year, from the end of February 1946, during which time they were free to join in Traffic Conferences with the other international operators of the world, without running into the mischief of anti-trust legislation. It will be for IATA to show during that period, by doing all it can to reduce rates to the lowest level consistent with economically sound operation, that it exists to protect the traveller and taxpayer, not to exploit them; to keep off the bandit (if any should appear), not to prop up the inefficient. I am personally confident that it will succeed in this venture, and that it will keep the nations of the world clear of the murderous and ridiculous subsidy race which did so much damage in the years between the two great wars.

The Association's terms of reference, wide as they are, need little comment, since they are obviously dictated by experience, common-sense and a desire to serve the Community. They are not unlike those of the old IATA, although much more comprehensive. They are all aimed at producing co-operation and uniformity; and the need for those qualities in international air transport was never greater than it is today. Shipping lines and wagon-lit companies have long since realized the necessity for and the value of collaboration; and in the air, with its special potentialities and limitations, it is absolutely vital. You will often hear people say that the aeroplane has conquered geography, and in a sense that is true; it has made nothing of seas and deserts and has successfully attacked many mountain barriers. But it has its worries, none the less. It cannot land anywhere it wants to, like a bird. It must find a properly equipped aerodrome; and it must know how to communicate with that aerodrome in fine or bad weather, in darkness or in light. What is more, it must land there, for the sake of safety, at a time when not too many others are trying to do the same thing and, for the sake of convenience, at a time when passengers can connect up, if they wish to, with other airlines or with onward transport of some sort. Here, then, there is a clear need for uniformity in methods of ground-air communication, and for co-operation in the preparation of schedules. Again it is an enormous help to operators' employees and to the travelling public if different airlines use the same booking forms, the same transport and traffic documents, grant the same

baggage weight allowances, make the same rules about cancellation, refund, stopover and the like. In the legal sphere, uniformity is absolutely necessary if, for instance, the carrier, the passenger and the consignor of freight are to be clear as to their liability position. Inter-company accountancy is another field in which consultation and agreement can bring about considerable benefits, and the establishment of Clearing Houses for financial adjustment is one of the most important tasks now before the Financial Committee.

These are only a few of the lines along which IATA can work to make life easier, more comfortable and safer for the travelling public. Such is its usefulness that a distinguished U. S. Senator is understood to have said that there are so many benefits to be derived from membership of IATA that a carrier can scarcely afford not to be a member.

It may well be asked, however, why an operators' association is needed to perform these functions. Cannot the International Civil Aviation Organization do the work, particularly now when so many important international airlines are Government-controlled? The answer is that PICAQ cannot nor does it wish to try. You cannot get an ill-fitting suit to fit by asking another man to tell your tailor where it doesn't fit. There will always be an operational point of view; and no one operator can truly say whether the regulations of the various Governments are suitable or in some respects they need amending. In every one of the many fields in air transport where government regulations are necessary in the public interest it is essential that the operators should get together and discuss the matters involved in the light of their own experience over their own routes with their own personnel. The people who do the work in IATA are all active airline operators, living hour by hour with their own airline, their own aircraft, their own personnel; and out of that growing body of experience (which cannot possibly be obtained in any other way), the operators can build up a corpus of operative knowledge which is the very foundation of sober government regulation. IATA has its clearly defined role. PICAQ has its defined role. The two bodies understand each other and are working together in the interests of safe and efficient air transport. IATA has no politics, no bias, no objective save one: To serve the public; to make air transport an effective tool in world affairs. The day it forgets that role it ought to cease to be. Till then it ought to continue, as at present, plucking the time and brains and vision of the active airline operators, probing ideas, resources, skill, experience and vision.

(Additional copies may be secured from American Aviation Associates, American Building, Washington 4, D. C.)

CHARLES H. BABB CO.



WORLD'S LARGEST DEALER IN AIRCRAFT, ENGINES, ACCESSORIES SUPPLYING LEADING AIRLINES, GOVERNMENTS THROUOUT THE WORLD

The following Airline Equipment is available—

Douglas: C-54s, C-47s, DC-3s, DC-2s

Consolidated: Catalinas and

Amphibians

Curtiss: Commandos, C-46s

Grumman: Goose G-21s, Widgeons

North Americans, Fairchild's, Vultees, Stinsons, Wacos, Stearmans

Lockheed: Lodestars, Hudsons, Electras

Boeing: 247-Ds

Beechcraft: Commercial Model 18s,
Military AT-11s, AT-7s

Sikorsky: S-43s

ENGINES AVAILABLE

Pratt & Whitney: R-2800s, R-2000s, R-1830s, R-1340 and R-985 all series.

Wright: R-1820, R-975, R-760 all series.

Jacobs: 300—285—245—225 h.p.

Lycoming: 300—280—260—245 h.p.

Propellers, Instruments, Radios, Accessories, Hardware

"If we can't supply it—it doesn't exist!"

U. S. Export Registration No. 124

East Coast Office
444 Madison Avenue
New York 22, N. Y.

1007 Airway
Grand Central Airport
Glendale 1, California

Cable address: BABBCO, Los Angeles, New York

Babco, S.A.
Reforma #1, Desp. 503
Mexico, D. F.



...and we at Solar are all for you.

LIKE the Frontiersman, who followed his dream to carve his own place from the wilderness, the returned G.I. depends today upon the spirit of America—Free Enterprise—for his opportunity.

Solar wishes success to every single one, because Solar, too, is a product of the American Way... born and raised under the protection of the Four Freedoms. America has always granted each individual the right to rise above a given station... to follow his vision... to satisfy his own conception of the word, Freedom. The fundamental principles on which this country rests make this possible.

The G.I. of today, starting afresh, has his choice—to enter business for himself—or to join an established organization. If he elects to start his own business, then he must work hard to make his venture a success... he must undertake the responsibility of ownership and authority... he must assume the risk of losing his investment.

If he decides to join an organization that started as a small business, like our own company, an organization that has conquered many problems to become a leader in its field, then he must be willing to assume the great responsibility of becoming a member of a team... an individual working in harmony with other individuals toward a common goal.

The important point is that he can *make his own decision*. Americans have always had this opportunity... and Solar believes, with other Americans, that our country will continue to provide a framework of opportunity for all free men.

SOLAR **STAINLESS PRODUCTS**

SOLAR AIRCRAFT COMPANY • SAN DIEGO 12, CALIFORNIA
DES MOINES 5, IOWA • 60 E. 42ND STREET, NEW YORK 17, N. Y.

Senate Spurred to Act on International Convention

Truman Asks Ratification To Protect U. S. Interests

By GERARD B. DOBBEN

SENATE consideration of the International Civil Aviation Convention before Congress recesses for the summer virtually has been assured through action of the Senate Foreign Relations Committee June 19 in favorably reporting the convention to the Senate.

Spurred to action by a special message sent to the Senate by President Truman June 11 in which he asked early ratification of the convention, the Foreign Relations Committee met June 14 to hear State Department and Industry witnesses. Sen. Owen Brewster (R., Me.) urged postponement of consideration until after the new Congress convenes Jan. 3, 1947. He opposed the convention on the grounds that it involved on the part of this country the granting of substantial rights to foreign countries.

Emory S. Land, president of the Air Transport Association, urged quick action on the convention lest the United States find itself in the embarrassing position of sitting on the sidelines while other nations, far behind this country in aeronautical technological developments and operating experience, formulate rules and regulations which might prove impractical and a burden to air commerce in the future.

A similar attitude was expressed by Clifford Roberts, of Boeing Aircraft Co., a spokesman for the Aircraft Industries Association, who expressed the belief that the promotion of international airworthiness standards would be appreciably furthered by the creation of an international civil aviation organization. He emphasized the need for uniformity in standards for certification of air transport aircraft.

Sen. Pat McCarran (D., Nev.) also appeared before the committee briefly to endorse the opposition of Sen. Brewster and to ask for deferment of consideration of the convention until the next Congress convenes.

After the meeting, Sen. Walter F. George, acting chairman, announced that

the committee would be called together June 19 to vote on the convention. This meeting was held as scheduled. A voice vote was taken and only Sen. Wallace H. White, Jr. (R., Me.), minority leader in the Senate, recorded his opposition. He also asked and received permission to file a minority report. Sen. George told reporters later the Convention would be considered in the Senate before the summer recess.

The convention, drafted December 1944 in Chicago, will require a two-thirds vote in the Senate. As the opposition probably will be along party lines, it was expected that the vote to ratify may be close.

Under the terms of the convention, the present Provisional International Civil Aviation Organization would be succeeded by a permanent organization which would be authorized to establish rules for air and traffic control, set standards for airworthiness of aircraft, collect and exchange meteorological data, establish customs procedures and provide for the registration of aircraft.

One phase of the President's message to the Senate was severely attacked by Sen. Brewster during the hearing before the Foreign Relations Committee. It referred to the President's statement of his power to make executive agreements, such as the Bermuda civil air agreement.

"Under Authority vested in me, I have actively undertaken to consummate such agreements, in order to assure the most favorable development of international civil aviation," the President's message stated. "Naturally, agreements of this nature to which the United States is a party are consistent with the requirements of the Civil Aeronautics Act, are valid under its terms, and fully protect the public interest. Under these agreements, before foreign air carrier permits are issued by the United States to foreign airlines, they must qualify under the provisions of the Civil Aeronautics Act."

Sen. Brewster told the committee that the Commerce Committee of which he was a member had sought to obtain from the Attorney General an opinion as to the authority of the President to consummate these executive agreements. He inferred that some Department lawyers, writing under their own names in law periodicals, had questioned this authority.

Smith Defends AA Future Extension Of Mammoth Air Fleet

An emphatic defense of his company's equipment-buying program was made June 15 by C. R. Smith, chairman of the board of American Airlines, who hit out at the "senile scoffers" and "critical old cronies" in the aviation industry whom he charged with stating that "we will never fill the airplanes that we have purchased."

Smith's statement, entitled "Friends in the Business?" appearing in the June 15 issue of *Flagship News*, AA publication, was one of the strongest made by an airline official in recent months. He included in his criticism some of AA's "principal competitors" in the airline business and some of the airplane manufacturers, "including companies from whom we are buying airplanes . . ."

"We have been busily engaged this week, endeavoring to raise additional capital for American Airlines to pay for the airplanes we have and the ones we have on order," Smith said.

"The capital will be raised; we will receive the money which we require; and we will continue to meet our obligations as they arise.

"This whole job has been made more difficult by some people in our business. As an example, some of the airplane manufacturers, including companies from whom we are buying airplanes, have expressed the opinion that the airline industry, and perhaps American, in particular, have 'overbought.' They have even been saying we will never fill the airplanes that we have purchased. This seems to be a lack of confidence in the industry, or a lack of faith in the future of air transportation.

"On top of that, some of our principal competitors in the airline business have been spreading the word that American has 'gone crazy'; that there will never be an increase of six to eight times in this business within the next few years. Let them be responsible to their own people for this little faith and this little confidence in the developing world of the air age.

"It is unfortunate that some people who make a living in this business, or make a living supplying this business, do not really believe in it. Air transportation would be better off without some of the critical old cronies who are drawing their livelihood, directly or indirectly, from the industry.

"We are shooting the works on this program, with the utmost of confidence. We do exactly that for the reason that we believe in America; we believe in air transportation; we believe in American Airlines; and we believe in you. Let's make these senile scoffers look silly. You can do it!"

Seek Agreement

Talks were underway in Mexico City as this issue went to press on a bilateral civil aviation agreement between the U. S. and Mexico. The U. S. delegation is headed by CAB Vice Chairman Oswald Ryan and consists of George Neal, Emory T. Nunneley, Jr., and John Sherman of CAB, and Joe Wolstrom and William G. MacLean of the State Department. Representatives of the five U. S. airlines now operating to Mexico are acting as advisers. Talks are a continuation of negotiations which opened in Washington last fall.



Hughes Moves Flying Boat—Photo shows the hull of the Howard Hughes flying boat as it moved down the highway from the Hughes plant in Culver City, Calif., to the graving dock built for it at Long Beach, where it will be reassembled for flight. Hughes estimated that it would require about four months to reassemble the boat. The giant craft was moved from the Hughes Aircraft plant to Long Beach in four sections—the two wing sections, the 45-ton hull and the tail assembly. It was moved overland on multiple-wheeled dollies by a crew of house movers.

Aircraft Service Operators Protest CAA Appropriation

Agency Would Be Competing Against Private Industry

FIXED base operators were waging a determined fight as this was written to eliminate the CAA repair base item from the Department of Commerce Appropriation bill which already had passed the Senate.

The CAA appropriation was increased \$63,460,720 over the bill which passed the House. The major increases were due to two items: \$52,000,000 to provide for the Federal government's share of proposed airport construction for fiscal 1947 and \$3,000,000 for airport planning and surveys. The total CAA appropriation as reported to the Senate was \$130,251,720.

The House of Representatives on May 3 had adopted the Randolph amendment which eliminated from the House bill authority for CAA to operate a repair base at Rogers Field, Oklahoma City, Okla., for its 231 aircraft. Some \$300,000 was involved in the operation of this base. The Randolph amendment limited to \$100 the amount of money which could be paid to a CAA employee in the repair of any single aircraft. Repair jobs requiring pay costs of more than \$100 were to be done by contract, after bids were taken.

After rejecting the Randolph amendment, the Senate adopted a provision limiting the sum which could be paid for aircraft parts not in stock or available on an exchange basis to \$100. As CAA claimed it had a five year supply of surplus parts, the \$100 limitation means practically nothing, Rep. Dean M. Gillespie (R., Colo.) a member of the House Appropriations committee, stated.

Soon after the Senate bill, containing the repair base item, was reported to the Senate, 11 repair base operators sent letters to members of the Senate asking restoration of the Randolph amendment. They said that the operators voice no objection to CAA suing surplus planes and parts since the taxpayer already has paid for them. However if CAA is permitted to hire mechanics and get into the business of repairing planes on such a scale, it will be competing with private industry, the operators stated. The operators had received assurance that some Senators would attempt to iron out the issues in joint conference with the House. The fight was being led by the Aeronautical Training Society and the National Aviation Trades Association.

Other increases provided by the Senate were: \$2,035,000 for Weather Bureau facilities as aids to air navigation; \$2,000,000 for maintenance and operation of meteorological facilities; \$875,000 for enforcement of CAA safety regulations, including certification of non-scheduled air carriers; \$393,000 for maintenance and operation of CAA aircraft; \$250,000 for technical development; \$353,102 for general administration, CAA; \$2,712,900 for establishment of air navigation facilities; \$8,877,418 for maintenance and operation of air navigation facilities. Total Senate increase of CAA's appropriations over House bill is \$63,460,720.

Adopts New Trade Name

Braniff Airways has adopted the new trade name of Braniff International Airways and has changed its advertising insignia to conform with its Latin American routes. The new identification is a circle silhouette of the three Americas over which Braniff will fly. This supersedes the former "Great Lakes to the Gulf" design used by the carrier.

Penzell Displays Sense Of Humor in Letter On AA's Freight Setup

The president of one of the largest of the nonscheduled air cargo companies gave the scheduled airline industry some hefty chuckles on June 17 when he wrote a letter to C. R. Smith, chairman of the board of American Airlines, "welcoming" American into the contract air freight field.

American had just made formal announcement of its entry into the contract air cargo field with full-page newspaper advertisements, and of course will offer stiff competition to the many nonscheduled operators who have developed a considerable cargo business since the war.

H. Roy Penzell, president of Air Cargo Transport Corporation, New York, with a masterful use of the English language of the type employed by the late President Roosevelt when he wanted to peer down his nose at an opponent, and combined with a few snorts of Machiavellian irony, sent a letter to Smith saying that ACT was mighty glad to have American Airlines join its cargo industry. The letter made good industry reading and seemed evidence that Penzell, a relative but vigorous newcomer to air transportation, has a sense of humor.

American will fly cargo at the unprecedentedly low rate of 11 cents a ton mile, about 8c under the next lowest rate.

The Penzell letter to Smith follows:

"As president of the oldest all-cargo charter carrier, I wish to welcome your company into this field. Air cargo as a new industry should be very near and dear to you, who, during the war, served so nobly as a Major General in the Air Transport Command. It was the ATC which pointed the way to peace-time air cargo transportation.

"This letter is prompted by the fact that a story quoting you in this morning's New York Times states that the interview was 'in response to criticism aimed at the company's entry into the contract cargo field.'

"The fact that your company has decided to enter the contract cargo field on a scale befitting the operations of your great airline is indicative of your own sound business acumen and would seem to vindicate our belief in this new industry. We believe there is sufficient potential business for all carriers who realize their responsibility of service to shippers and are qualified to render this service.

"We welcome you into the 'contract cargo



Returns to United—W. H. "Bob" Neff has been named special assistant to W. A. Patterson, president of United Air Lines. His headquarters will be in New York where he has been public relations manager of the Atlantic Division of Pan American World Airways. Neff, well known in public relations circles, first joined UAL in 1935. During the war, he served as a Commander with the Navy.

field' because we feel that to date the surface has only been scratched. As in any new industry education of the public and the potential shipper has been and for some time will continue to be necessary. The effectiveness of advertising and promotional work you will do in this field will be of great value to the entire industry.

"You may recall that we were the first cargo carrier to announce and advertise what was then a new low rate of 20 cents per ton mile and to eliminate the system of multiple classification for cargo. We announced the 20 cent rate not with any idea of initiating a rate war, but because we knew as a result of surveys made in this field that at 20 cents there was sufficient volume of business to make it profitable.

"It was about this time that I predicted an 11 cent rate when there was a sufficient volume of business and improved equipment to reduce operating costs. The 11 cent rate will obviously open the facilities of air cargo to an even larger number of potential shippers. In this industry we who fundamentally understand sound merchandising technique will enjoy the benefits of this potential volume cargo.

"Those of us who enjoy clean and open competition in this industry, with those who best perform surviving, look forward to governmental control and an essential readjustment culminating in governmental subsidized airlines such as yours, and non-subsidized business such as ACT, all being on the same footing."

PAA Buys Convair 240

Pan American Airways announced signing of a \$4,500,000 contract with Consolidated Vultee Aircraft Corp., for 20 Convair Model 240s, with an option to buy 30 additional aircraft.

The aircraft are scheduled for delivery next summer and while no decision had been reached as to where the planes would be used, PAA officials said they considered them suitable for Latin American or Alaskan service.

National Affairs and Congress

Postpone Tokyo Service

Lack of weather and communications facilities held up inauguration of daily air service between Seattle and Tokyo, scheduled to begin June 15. Many AAF stations were withdrawn along the proposed route after V-J day and these must be replaced before operations can begin. Adak will be the only intermediate stop.

Map Power Projects

Fairchild Aerial Surveys of Los Angeles has received a contract to air map the upper Missouri River basin. The contract was placed by the Bureau of Reclamation to speed design and planning work on irrigation and power projects.

Favor Unification

Comment in general by Congressmen indicate that they favor President Truman's plan for unification of the armed forces. Overruling Navy opposition, the Chief Executive sided with the Army by recommending a single department of national defense with Army, Navy and Air Force responsible to one Secretary of national defense with cabinet rank and recommending that the Navy be deprived of all land-based aircraft.

Jets Set New Record

Three P-80 AAF jet planes have set a new transcontinental roundtrip speed record of 12 hours, 22 minutes. The AAF said the flight was made to study long range flight operations of the Lockheed fighter. The course was from March Field, Calif., to Washington and return.

Marine Air History

The Air Power League has granted a fellowship for a writing of the history of Marine Corps aviation during the war. This completes a cycle of air war histories sponsored by the League, according to Gen. F. Trubee Davison, president.

Asks Air Policy Board

The National Federation of American Shipping, through its president, Almon E. Roth has filed a statement with the Senate Interstate Commerce Committee, urging the establishment of a National Air Policy Board. This is in support of the Mitchell bill. Roth, in his statement, deplored the action of CAB, denying shippers the right to operate air service, saying that CAB was threatening the existence of American passenger services whose ships are so vital as troop carriers.

To Head Airline

Maj. Gen. Claire L. Chenault has disclosed that he will return to China soon to organize an airline to distribute relief to stricken areas. The line is to operate under contract with China's counterpart of UNRRA with headquarters at Hankow.

Breaks Speed Record

An A-26, equipped with an auxiliary jet power plant, broke the international speed record over a 621-mile course on June 20, flying it in one hour, 30 minutes and 40 seconds. The plane made the record run between Wright Field and St. Louis with a 413-mile an hour average to break the 325-mile an hour record set by an Italian Breda on Dec. 9, 1937. Lt. Thomas P. Gerrity of the AAF Material Command's procurement division was the pilot.

AAF Appropriations

The House of Representatives on June 21 passed the War Department Appropriation bill which contains an appropriation of \$1,199,500,000 for the Army Air Forces for the fiscal year beginning July 1, 1946. Included in the Air Forces appropriation is \$185,500,000 for research and development in aircraft, electronic devices, guided missiles and engines. The bill also provides \$49,000,000 for utilization of commercial airlines for travel of military personnel. The bill provides for the procurement of 1,020 planes at a cost of \$368,701,400.

Egypt Signs Up

A bilateral civil aviation agreement has been signed by the U. S. and Egypt under which an American carrier receives the right to pick up and discharge passengers in Cairo and to make non-traffic stops at other Egyptian points. Egypt receives reciprocal rights for services to the U. S.

May Alter Control

Control of aviation legislation in the Senate will pass to a new Interstate and Foreign Commerce committee if the House passes the Senate draft of the LaFollette-Monroney bill streamlining Congressional committees. Because of seniority, it is assumed that Sen. Burton K. Wheeler (D., Mont.) would become chairman of the committee rather than Sen. Josiah W. Bailey (D., N. C.) chairman of the Commerce Committee, which is abolished under provisions of the bill which passed the Senate by a 48 to 16 vote. Wheeler is now chairman of the Senate Interstate Commerce committee.

To Aid Large Airports

Federal aid funds for Class IV and V airports as well as smaller fields have been favored by a subcommittee of the House Interstate and Foreign Commerce committee, in its report to the full committee. This is in support of the Bulwinkle amendment to the Federal Airport Act which provides for allocations for airport construction.

Bombers From Britain

A squadron of 18 British bombers will fly to this country for a tour of leading military air bases, arriving July 17. Included in the itinerary of the squadron will be New York, Washington, St. Louis, Los Angeles, Denver, Long Beach, San Antonio and West Palm Beach. Crews of the visiting aircraft will comprise 40 officers and 176 enlisted personnel headed by Group Captain R. C. M. Collard and Wing Commander A. J. L. Craig.

Flag Line Bill Dead

The All American Flag Line bill, S. 326, is dead as far as the 79th Congress is concerned. Sen. Pat McCarran (D., Nev.) author of the bill, told the Senate Commerce committee June 20th that he would not press for hearings on the bill during the present session. The bill will die with the 79th Congress, Jan. 3, 1947.

License Foreign Pilots

Foreign pilots, ferrying planes from the U. S., or maintaining skill while flying personal planes in this country, may now receive Limited Pilot Certificates from the CAA. The licenses will not be recognized for commercial flying and the applicant, to secure such a permit, must hold a valid certificate granted by his native country.

Seek Yanks From RCAF

John L. Scherer, former RCAF-AAF officer, is completing a roster of eligible members for the Hat and Leaf Squadron, composed of Americans who served with the RCAF, prior to January, 1943. Scherer maintains headquarters at Penn Yan, N. Y., and requests that applicants write him, enclosing a reply stamp.

Include Air Show

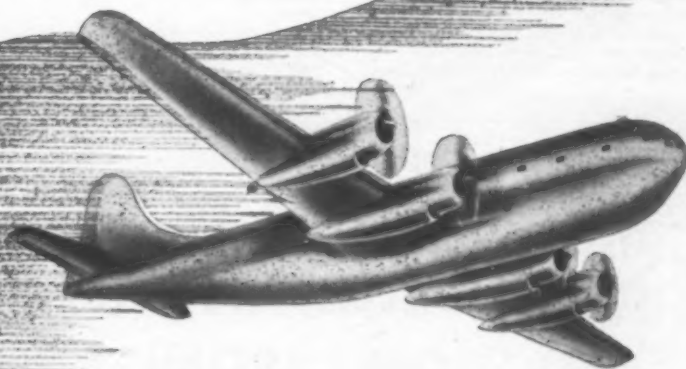
The City of Milwaukee and the NAA expect 1500 private planes as well as representation by the Armed Forces during the Centurama Aviation Show, July 12 to August 11, during the centennial celebration at the lake city. Among the aviation events to be held during the period are the annual Airport Users Conference, Private Flying Conference and Air Youth Training Conference.



Army's Newest Bomber—Here is one of the first photos of the Army's newest and largest land-based bomber, the XB-36. Built at the Ft. Worth (Tex.) division of Consolidated Vultee, the XB-36 now is undergoing ground and taxi tests. Initial flights are scheduled later in the summer. The bomber has a wing spread of 230 feet, fuselage length of 163 feet. The pusher type aircraft is powered with six Pratt & Whitney 3000 hp. engines, and carries a crew of 15.

BOEING
selects Honeywell
Electronic Fuel Gages
and Turbosupercharger Controls

for the NEW **377**
STRATOCRUISER



MINNEAPOLIS
Honeywell
CONTROL SYSTEMS

CREATIVE ENGINEERING



MAKERS OF THE FAMOUS M-H ELECTRONIC AUTOPILOT, USED ON AAF 4-ENGINE BOMBERS

Foreign Air News

By Frank M. Holz

Buys Into Panini—Barnett L. Russett, president of the Metropolitan Trust Co. of Chicago, purchased 50% interest in the Mexican airline Servicio Aereo Panini in a million-dollar deal, according to information from Mexico City. Plans of Aero Industries Corp., of New Haven, Conn., to acquire 49% of Panini were not carried out as previously reported. Three C-47s were bought for the airline by the new ownership and are being converted by Timm Aircraft Co. of Van Nuys, Calif. Panini now flies between Mexico City and Reynosa, near Brownsville. The C-47s will be used to start a new service between the Mexican capital and Tia Juana, near San Diego, Calif. The present Panini fleet consists of four Boeing 247-Ds and one Douglas DC-2.

Gets Oil Contract—Skyways Ltd., a new British charter firm, has contracted with the Anglo-Iranian Oil Co. for all transport of the oil company's personnel and supplies between England and the Persian Gulf area. Operations started with two round trips per week with Avro York aircraft, of which the company has two. It is proposed to add two Lancasters and a de Havilland Dove in the near future. The firm also has a contract with Sir Henry Lunn Ltd. for aerial cruises to Switzerland.

FAMA Flies Atlantic—Flota Aerea Mercante Argentina (FAMA), the Argentine government-controlled international airline, recently inaugurated transatlantic service with a Short Sunderland flying boat chartered from Cia. Argentina de Aeronavegacion Dodero. The flight was made to London via Rio de Janeiro, Natal, Lisbon and Biscarrosse, France. No official explanation has been received regarding the terms on which FAMA char-

tered the Sunderland from the Dodero interests which had agitated vigorously for the right to provide service against the government's policy of monopoly for FAMA. Usually well informed contacts state that one of Dodero's conditions was permission to acquire control of the airline Corporacion Sudamericana, which has been operating between Buenos Aires and Montevideo. It is said that Dodero officials negotiated this agreement directly with President Juan D. Peron.

Fifth Freedom Problem—Reluctance to grant Fifth Freedom traffic rights through London is believed to be the reason Great Britain has not yet concluded air transport agreements with Sweden, Denmark, Norway and the Netherlands. The New York-Amsterdam flights of KLM Royal Dutch Airlines have been routed via Prestwick, it is reported, because that is the only point in Great Britain at which KLM may pick up or discharge intermediate traffic. The British Government is reported to have offered to permit Dutch and Scandinavian carriers to operate via London—but without Fifth Freedom rights. The choice was Prestwick and Fifth Freedom or London and no Fifth Freedom.

• Ansett Airways Pty. Ltd. has succeeded Ansett Airways Ltd. as the result of a recent reorganization in Australia. The new company operates air services only whereas the former Ansett firm also controlled companies manufacturing aircraft parts and operating bus services. Ansett Transport Industries Ltd. has been organized as an overall holding company with three subsidiaries, one of them the new Ansett Airways.

• The British Air Ministry has erected a Consol radio-navigation experiment station, operating on a 1140 metre wave length, at



Joins TWA—Major General Benjamin Franklin Giles, former Commanding General of the Africa Middle East Theatre, has been appointed as a vice president of TWA. He will direct the lines expanding activities in Africa and the middle east.

Bushmills in Northern Ireland. Consol was developed from the Sonne system used by the Germans for beaming bomber flights.

• The Yeoman plant of A. V. Roe & Co. Ltd. will stop aircraft production before the end of the year. Employees have already been informed that they will be transferred or dismissed. Disposal plans for buildings and equipment have not yet been announced.

• Iraqi Airways of Iraq and Middle East Airlines of Lebanon now provide joint air service between Baghdad and Beirut. This "Cedar Route" service operates five round trips weekly, with both airlines using de Havilland Rapides.

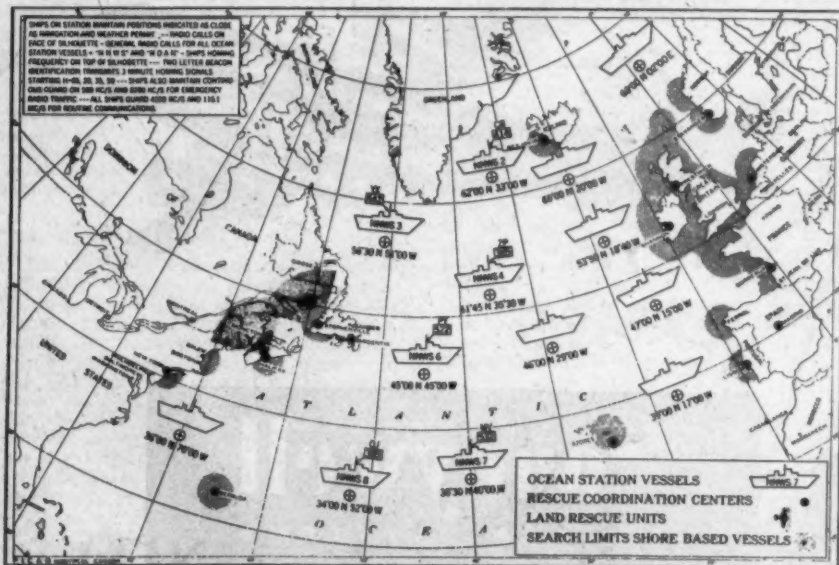
• Aircraft of the Royal Australian Air Force are reported flying between Chungking and Hong Kong with 20-ton loads of hog bristles, one of the commodities with high priority on the China-India "Hump" operations during the war. Bristles are important again because of the demand for high-grade paint brushes caused by Australia's housing program.

• British Overseas Airways has placed into effect the following lower fares on Empire trunk routes: London-Cairo, \$262 (previously \$343); London-Calcutta, \$534 (previously \$566); London-Singapore, \$685 (previously \$834); London-Sydney, \$1048 (previously \$1206). The dollar rates are the nearest round figures obtained by taking \$4.03 as the exchange rate for the pound sterling.

• Between 30 and 40 German scientists and technicians noted for their work with high speed flight are carrying on research in gas turbines, aerodynamics and jet propulsion problems at the Royal Aircraft Establishment at Farnborough, England. They are not treated as prisoners of war but are given the status of visiting aliens.

• Scottish Airways has established daily services on its prewar routes to the Orkney, Shetland and Outer Hebrides Islands off Scotland.

• The British Ministry of Civil Aviation has been raised to the status of a Department of State in the Cabinet, with Sir Henry Self as Permanent Secretary and head of the Civil Service staff. Air Chief Marshal Sir Frederick Bowhill, recently Britain's representative on the PICAO Council, has joined the staff as Air Advisor.



North Atlantic Weather Ships—At the locations shown, PICAO nations whose airlines operate in the North Atlantic are to maintain 13 ships as floating meteorological observation posts. First planned at the PICAO North Atlantic regional conference held in Dublin last March, individual vessels are to be operated by designated nations, according to discussions at the recent PICAO Assembly in Montreal. The U. S. Coast Guard is currently operating at least five weather and rescue patrol vessels in this area and will operate the U. S. allotment of the PICAO network.

San Juan Run Gold Mine as Puerto Ricans Take to Air

Limited Steamer Facilities Add Revenue To Airlines

By ROSE L. MARTIN

WAR EARNINGS and lack of steamer accommodations during the war have made Puerto Ricans of all classes intensely air-minded. In 1945 Pan American Airways—until lately, sole carrier in the field—flew some 53,000 passengers to and from San Juan, as compared to 4700 in 1941. Throughout the war the San Juan run has been a gold mine, still remains today one of the most lucrative terminal hauls on PAA's world network.

For Puerto Ricans are the least insular of islanders. They stream back and forth to the continental United States to work, shop, study or become absorbed into New York's thriving Puerto Rican colony of 300,000, more populous than the capital city of San Juan. While a fourth of the island's trade with this country (total, about \$200,000,000 in 1941) moves through Gulf ports, Puerto Rican passengers with few exceptions head for New York City—though it is eventually hoped to divert a portion of the traffic, via New Orleans, to the Mississippi Valley and Midwest.

Children Study in U. S.

Well-to-do Puerto Ricans send their children to school on the mainland, bring them back for vacations several times a year. The working classes flock to the United States when work or relief is plentiful, return when times are lean. As they prosper they send for their relatives, either singly or en masse. Not long ago one Liborio Cappa who had acquired farmlands in California chartered an entire Pan American plane to bring his kin, numbering 32 souls, to the United States.

Since Pearl Harbor at least 150,000 Puerto Ricans, most of whom formerly travelled second or third class by steamer, thought nothing of paying \$115 (now reduced to \$105) for an airplane ticket to Miami, whence they hopped trains, planes or buses to New York. With direct non-stop flights via a great circle route to New York being offered by charter and PAA schedules on the same route expected to begin in July, with 3½ cent per miles plane fares promised in due time, steamship operators believe that Puerto Ricans will continue to take to the air. The Waterman Steamship Corp., as if seeing the handwriting on the wall, has announced it will soon begin a passenger-light freight charter service by DC-4 to San Juan and other points.

Since money is still relatively easy and steamer passage still severely limited, travel-hungry islanders throng the airways today as never before. The Puerto Rico Chamber of Commerce estimates that planes to and from the island (population, between two and three million) will carry upwards of 80,000 terminal passengers this year, if the present rate of travel persists. Air freight is up fully 50% over 1945's record 140,000 lbs., with several new industries, notably flowering plant and shrub nurseries, being developed in Puerto Rico as a result.

Pan American, however, no longer

holds the field alone. Months ago other established U. S. airlines, seeking a share in the bonanza, applied to the Civil Aeronautics Board for routes to and through San Juan. Then a strange thing happened! While the CAB debated, PAA protested, and waiting lists of passengers and shippers lengthened into the thousands, a swarm of fledgling contenders blew in without warning.

They were the little come-lately charter lines which hauled tourists and freight to Miami during the season, then struck out across the Caribbean in a bid for overwater traffic. Flying Army-surplus DC-3's and Lodestars frequently purchased on a shoestring, they maintain no fixed schedules, thus need not wait for CAB certificates. (Material on the non-scheduled operators was gathered before issuance of the Civil Aeronautics Board's decisions covering these operators. Effect of the decisions on these particular operations is not yet apparent.) Some operate a single plane with bucket seats, others boast four or five ships with stewardebuses and cushioned armchairs.

In January, about the time when PAA cancelled its regular cargo plane to San Juan, the charter boys began running freight to Puerto Rico and bringing out 500 to 800 passengers a month during the next few months. Throughout May, for some reason, their activities zoomed, with half a dozen unscheduled flights coming

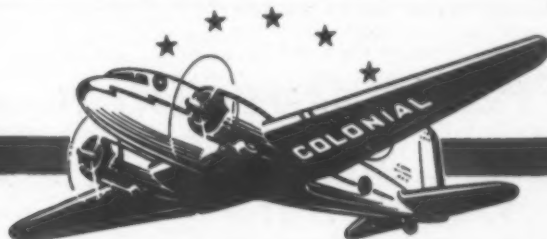


Intrastate Head—H. O. "Rocky" Nelson is president of Arizona Airways which has begun intrastate schedules in Arizona, flying converted C-47s. Nelson formerly was a barnstormer, airport operator and head of a Navy training program.

into San Juan every day and new lines appearing out of the blue.

Their sudden invasion, though filling a genuine need of the moment, has split the local aviation picture wide open. The resultant chaos is said to have encouraged the CAB to announce its formal award of Caribbean and Latin American routes on May 22. While several factors of convenience and necessity may prevent Eastern Air Lines and Chicago & Southern from scheduling their new San Juan routes before fall, the charter boys continue to make hay in the summer sunshine of Puerto Rico, with its vaunted 360 good flying days per year.

At last count, 16 charter lines were found to be landing on the Navy-owned runway at Isla Grande airport—some now



**NOW DIRECT AIR SERVICE BETWEEN
WASHINGTON • SYRACUSE
BALTIMORE • MONTREAL
READING • OTTAWA**

Linking the capitals of the United States and Canada with their first direct air service, Colonial Airlines has taken another important step forward in international transportation.

18 Flights Daily New York - Montreal

COLONIAL AIRLINES

630 FIFTH AVENUE, NEW YORK CITY

and then, some once a week, some with a full load of passengers every day. They are: Universal Airlines, Skyways, Trans Caribbean World Airways, Tabor Luxury Airlines, Caribbean American, Caribe, Winged Cargo, Argonaut, Twentieth Century, Willis, Waterman, American Export and Import Cargo Lines, Air Freight, International Continental, West Indies Aviation, Puerto Rico Air Transport.

Of these, at least four are Puerto Rican-owned: Caribe, flying two DC-3's on the Miami-San Juan run; Puerto Rico Air Transport, which in addition to its plane services operates a consolidated ticket office for charter lines in San Juan, just as International Continental does in Newark, N. J.; West Indies Airlines which, besides running a local charter service with Cessnas and a local flying school, supplies emergency maintenance in San Juan for other charter lines; and Trans Caribbean World Airways, owned by the Puerto Rican Express Company.

Most promising of the locally owned charter lines is Trans Caribbean, with 40 years of express business behind it and an established clientele throughout the island. For 40 to 50 cents a lb., it now offers a door to door pick-up and delivery service, using railway express for the overland hauls and eliminating brokerage fees at ports of exit and entry. This line enjoys the sympathy and good will of native business men, particularly in the needlework industry which Puerto Rican Express has helped to promote.

Of the continentally owned charter lines, Skyways with four or five planes and Universal Airlines now landing 21 passengers daily on a direct New York-

San Juan run appear to lead the passenger field. American Export and Import Cargo Lines and Air Freight, which holds department store contracts and plans to concentrate on building the package trade (though its San Juan cargos today comprise chiefly gloves, drugs, cosmetics, plants and baby chicks) can probably be considered to have the best chances of survival in that not-too-distant day when scheduled airlines will be equipped to handle the existing passenger overflow.

The charter boys are checked in and out of San Juan today on weather signals from the Navy, which still controls the airport under a wartime set-up. For the privilege of moving their passengers through the PAA-operated terminal building, where customs and immigration services are located, they pay fifty cents a head per passenger. According to airport officials, PAA collected \$1400 in head taxes from the charter lines during May. In that month the veteran airline also moved 4700 of its own passengers through the same small building, designed to accommodate a pre-war traffic of three to four thousand a year.

Conditions are hectic at the airport, where sociability of Puerto Ricans adds to the congestion. There are at least half a dozen relatives and friends to greet each arriving and departing passenger. On a busy afternoon the effect is that of a stampede. Until some means of improving facilities at the airport terminal can be worked out with the Navy or, in case of Navy withdrawal, with island officials, it seems unlikely that other scheduled airlines will begin regular operations to San Juan.

These were other developments among non-scheduled and intrastate operators:

Airgo, Inc., a subsidiary of Wallace Air Service, 20-year fixed base operators, is using Seattle as a terminal and Spokane as base for operations for cargo routing from the Pacific coast to Denver, Chicago and eastern points. A contract hauling service was conducted before the war by the Wallace organization.

Columbia Airlines, Inc., has inaugurated a 45-minute passenger service between Baltimore and Ocean City, Md., via Bishopville. Pan Maryland also plans to offer daily flights over the same route. Five to six daily schedules are planned.

Willis Air Service, New York, has changed its name to the Commander Line and re-capitalized due to expanded operations. This non-scheduled international line is owned and operated by Willis-Rose Airlines, Inc., and operates in Canada, United States, Puerto Rico and Cuba, using DC-3's and one DC-4.

Air Cargo Transport Corporation has flown 200,000 swim suits from California to the east, during 1947. Manufacturers of the swim togs were so pleased with the delivery service that they are having raw materials for more suits, flown back to the Los Angeles factory, from the east. George L. Hayes is general sales manager for ACT.

Flying Freight, Inc., will use both flying boats and land planes from U. S. points to the Caribbean area and South America. A fleet of 12 Stranrear flying boats and six landplanes are to be utilized in the service.

Allegheny Air Cargo, Inc., with capital of \$110,000 and International Veterans Airlines, capitalized at \$200,000 are among the new corporations listed by the Prentice-Hall office, Wilmington, Del.

Ted Clarke, manager of Pomona, California, airport has inaugurated a non-scheduled service between Pomona and Reno, Nev., flying a Cessna UC-78. No name has yet been adopted for the passenger and cargo service.

Rainier Air Freight Lines, Inc., of Seattle have been incorporated with a capitalization of \$50,000. Headquarters will be the former ATC station at Boeing Field. Three former AAP pilots head the organization which will offer flight service in C-47's at the beginning.

Terry Air Transport, formerly operating winter schedules between New York and Palm Beach, have opened a daily passenger service, linking Barre-Montpelier, Rutland, Boston and New York City. Flights, dependent upon weather conditions, will originate each morning, according to present schedules.

William Isaac Hall, former RCAF and RAAF pilot, has been granted a license by the Canadian government to operate a non-scheduled airline to be based at Val D'Or, Quebec. Hall is a well known pre war bush pilot.

American Air Export and Import Lines flew models from New York to Atlantic City for a recent Kresge store fashion show, during the convention of Kiwanis. A DC-3 of the Flamingo fleet was used for the round trip flight.

Air Cargo Transport Corp., has vigorously denied that any association is empowered to speak in its behalf, regarding the recent CAB rulings. ACT emphasizes that it will welcome any sound and equitable regulations proposed by the Board, according to H. Roy Fenzell, president.

Skyfreight Airlines, Dallas, Tex., has begun a non-scheduled cargo service with five converted DC-3s. The inaugural flight was between Dallas and Los Angeles, but the company plans to set up transcontinental schedules between Newark and Van Nuys, Calif., via Pittsburgh, Columbus, St. Louis, Albuquerque and Phoenix. R. G. Wingfield of Dallas is president.

Arizona Helicopter Service of Phoenix has filed articles of incorporation in Arizona. The firm proposes to operate a charter, aerial rescue, ambulance, fire spotting and advertising service. Paul M. Roca and Elias M. Romley were the incorporators.

Airline Openings...

● New airline recently certificated by the Civil Aeronautics Board for routes on west coast has openings for many positions in executive, traffic, maintenance, engineering, operating and communications departments.

● Headquarters will be in California and operations will start shortly with Douglas DC-3 equipment.

● All applications will be considered in strictest confidence. When writing, supply full details of background and experience and minimum salary required. Specify particular job for which qualified.

★

Send all Letters to Box 501

AMERICAN AVIATION, AMERICAN BUILDING
Washington 4, D. C.

Many Policy Decisions Call For Consideration At June ATA Meeting

The board of directors of the Air Transport Association was expected to make important policy decisions at a meeting scheduled for June 26 in Washington. These involved such matters as proposed changes in ATA's articles of association, establishment of an airlines' operations conference, approval of new applications for ATA membership and establishment of an airlines engineering committee.

The agenda also included: Adoption of the ATA budget for the last six months of this year, receipt of reports from the McGoldrick committee on its survey of airport terminals, possible adoption of Association policy with reference to non-scheduled air carriers and the hearing of reports on the status of federal legislation.

Proposed changes in ATA's articles of association are said to hinge largely about changes made necessary by the Association's new organizational set-up. Some of the proposed changes, it was stated, are designed to define and broaden the powers of both the officers and the board of directors. One of the changes would definitely give the President of ATA the authority to select employees and fix their rate of compensation.

Establishment of an airlines' operations conference is said to have been recommended by the operations committee of ATA. Main purpose is to make binding, on all members, conference decisions and commitments.

The proposed new engineering committee would be authorized to make studies and recommendations on engineering policy matters, prepare detailed recommendations for technical improvement of Government regulations applicable to airline operation, recommend investigation by Government research laboratories on airline problems concerned with the progress and safety of airline operations, provide the Government agencies with a single point of contact on technical problems and name subcommittees to make investigation of specific problems relating to the committee's activities.

Applications for membership in ATA of the following airlines was to be considered: Pacific Northern Airlines, Anchorage, Alaska; Pan American Airways, Alaska Airlines, Inc., Anchorage, Alaska; Caribbean-Atlantic Airlines, Inc., San Juan, P. I. and American Overseas Airlines, Inc.

The ATA Board also was expected to pass upon the form of proposed legislation for establishment of state aeronautics departments or commissions and a suggested educational program in which airline presidents would deliver addresses on pertinent air transport problems before public gatherings throughout the country.

To Train Vets—With 1500 veterans on the payroll, PCA has adopted a training program to embrace all phases of airline operations. Project has been approved by the Veterans Administration which may later approve training in other departments.



Baby Cradle—American Airlines is equipping its DC-4s with newly-designed baby cradles, made of aluminum tubing and water-proofed material and weighing less than three pounds. The cradle is supported by the magazine rack edge and a special tubular fitting which attaches to the hat rack rail. This three-point suspension makes a comfortable and safe sleeping place for children under three years of age and weighing up to 35 pounds.

Air Carriers Protest Additional Insurance

The Oklahoma commission for the control of intrastate air traffic is meeting opposition from major airlines which contend that certain proposed state regulations would be a duplication of federal effort. The concerted airline attack began June 5 after the commission suggested to impose on the carriers, a local requirement that they provide insurance or bond to cover loss of life, property and cargo, in case of accident.

Airline attorneys entered formal protests against all of the proposed regulations and made specific attacks on individual sections. If put into practice, operators would be required to provide \$5,000 coverage for each airline passenger; up to \$20,000 public liability for any one accident; \$5,000 property damage and up to \$1,000 for cargo loss.

Chairman Reford Bond, after hearing the opinions of the operators, postponed further hearings until July 19. The time, said, would afford the airline men more opportunity to become acquainted with the proposed regulations.

Aviation representatives participating in the early hearing included Leonard Savage, American Airlines, Jay M. Jackson, Braniff Airways, Donald Duff, Continental Air Lines, W. M. Morgan, Oklahoma Airways, Lloyd Catlin, Oklahoma Aviation Association and Dick Martin, manager of Oklahoma City municipal airport.

New KLM Press Chief

Rein Vogels, formerly chief of Philips Radio of The Netherlands, assumed on June 1 his new duties as Chief of the Press Section for KLM Royal Dutch Airlines, with offices at The Hague. Fred K. A. Rombach, former acting chief of the section, is reported slated for a position in KLM's new public relations office.

Transport Notes

Modify Norsemen—All American Aviation has completed the modification of six Noorduyn Norsemen to eight place carriers for South American Trading Corp. Army surplus units will be used for feederline service by Cia Argentina de Aeronavagacion.

Overseas Tickets—American Airlines has established transatlantic flight sales offices at 18 West 49th Street, Rockefeller Center, New York. Limousine service for overseas passengers will be routed from the new location instead of the Airlines Terminal building.

Passenger Increase—Inauguration of 60-passenger DC-4 equipment between Boston and New York has been a contributing factor in increasing Northeast passenger revenues. May system totals of 33,821 showed increase of 151% over May, 1945. Boston run increase was estimated at 70%.

Radio Advertising—Eastern Air Lines has adopted twice-daily radio transcriptions to remind listeners of air travel convenience. Minute spot announcements are now heard via 30 stations in 17 leading cities.

Name Agency—National Airlines has turned its advertising over to the Grant Agency. Account will be handled by John Dey of the Miami division.

Allow More Baggage—United Airlines has raised its free baggage allowance from 55 to 66 lbs. The regulation eliminates the previous free transportation of international traveler's baggage of 40 lbs. by air and 100 lbs. by surface carrier. PAA has also increased overseas baggage allowance to 66 lbs.

C-47 Guinea Pigs—TWA has assigned three C-47s to schedule freight service. Operators expect to gain first hand information as to cargo loading and interior arrangements for freight planes by use of the Douglas transports.

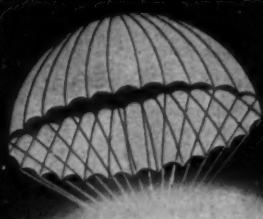
Reduce Rates—Summer travelers, flying via PCA, may have their baggage forwarded at rates reduced as much as 50%. Prior arrangements will be required for baggage weighing more than 200 lbs. or over 152 in. in girth.

Fly Furniture—United Air Lines recently flew a full load of home furnishings from Buffalo to Des Moines for the opening of a new department store annex. New handling and tie down procedures were employed for the first time and entire load was carried in a Cargoliner 180.

Meet Deadline—Exactly on the scheduled date, Douglas aircraft completed and delivered the seventh modified C-54 to Delta Airlines. Orders for the converted craft were signed during November 1945 and first delivery of a DC-4 was made in February of this year.

Double Business—American Airlines doubled its May 1945 passenger record out of La Guardia Field by averaging 1782 passengers daily during May, 1946. April business also set a new record for the same company.

Graduated—Eastern Air Lines school for flight attendants has turned out a new class of 25, including 21 stewardesses and four pursers. The group, representing 12 states will enter service immediately on Silverliners.



INTERNATIONAL FLARES

Brilliant light — at the flip of a switch. Pilots flying aircraft equipped with INTERNATIONAL FLARES can be sure of the best possible break when lost or forced down at night. For all types of commercial or private planes. The only complete line of landing flares to meet full C.A.A. requirements.



1-minute Flare

Efficient, safe, over 75,000 candlepower. For planes under 3500 lbs. gross weight. Three flares makes compact installation for private planes. Similar type flares can be fired from cabin with International flare pistols.

3-minute Flare

For planes of any weight, scheduled or unscheduled operations. Sealed all-metal case assures longer effective service life. May be installed in wings or fuselage. Exceeds 200,000 candlepower.



The
KILGORE MFG. CO.

International Flare Signal Div
WESTERVILLE, OHIO

Airline Commentary

WE WROTE a letter last week to our friend Gael Sullivan, the Second Assistant Postmaster General, who has charge of all air mail . . . We thought you might like to read it and we're sure Mr. Sullivan wouldn't mind . . .

Dear Gael:

Pretty soon, we hope, we're going to have that decrease in air mail postage rates that you've been fighting for. When the rate drops from 8c to 5c, you will have a golden opportunity to do a service for your country.

Have you glanced recently at the picture of the airplane that adorns the 8c air mail stamp? We have not had the "design" analyzed by engineers, but some of our friends in the armchair expert class doubt if it would fly. It is a twin-engined airplane with a triple tail, which is probably all right, but it looks like it was a combination of several designs. Obviously the artist who drew it knocked himself out trying to be impartial.

Now, impartiality is all right, but several different manufacturers have built airplanes that are carrying, and will carry, the mail, so why not recognize the fact? Our humble opinion is that the Post Office Department can recognize the fact and do so without playing favorites.

With the advent of 5c air mail, why not issue a series of air mail stamps? One could carry a picture of a DC-4, another a Constellation, another a DC-6, another a Strato-cruiser, another an air mail pickup plane, etc. This should make an interesting series, and it would keep everyone happy, including the Post Office, the manufacturers and the stamp collectors.

We hope you won't think us presumptuous in making such a suggestion, but we like to look at pretty airplanes, and the one on your present stamp does not, in our opinion, fall in that category.

(Mr. Sullivan was about to leave on a world-circling trip when he received our letter. If by chance he is able to answer it before leaving, we'll let you know what he says.)

Did you know (and we'll bet you didn't) that there's one state in these United States that is not served by any regularly-scheduled passenger-carrying airline? . . . That state is Delaware . . . We say passenger-carrying airline, because Wilmington is the home of All American Aviation, which operates air mail pickup service . . . American Airlines wants to serve Wilmington on its transcontinental route, so maybe we'll have service in all 48 states . . .

Here is a right interesting story, we think . . . In a recent column we noted that "Pop" Johnson, the founder of Johnson Aircraft Co., which builds the Johnson Rocket, had three sons, all of whom were airline captains . . . We expressed the opinion that this might be the "flyingest family there is" . . . Right away we got a letter from David O'Connor, manager of O'Connor Aircraft Co., Albany, N. Y., who wants us to know that it ain't so . . . There are nine O'Connor boys, says Dave . . . "Of the nine," he explains, "six are commercial pilots and are actively engaged in commercial aviation as follows: Charles P. (Chuck), State of New York Department of Commerce pilot; Robert, PCA captain; William, PCA captain; Walter, commercial pilot, fixed base operator, Springfield, Mass.; David, ex-captain, AAF commercial pilot, manager, O'Connor Aircraft Co., Albany, N. Y., and Cornelius, ex-lieutenant, AAF, commercial pilot, chief pilot, O'Connor Aircraft Co. For your further amazement, Chuck has three children, two boys and one girl. John the oldest (20), is a commercial pilot, with all ratings and has just been separated from the Navy where he served as a flight instructor with the rank of ensign. As of this date, he has soloed his brother, Charles Jr., age 17. We do not know, but believe that this record has not been equaled anywhere in the world." . . . We stand corrected and make hasty amends to the flying O'Connors by awarding them the "flyingest family" title hands down . . .

We think that airline stewardesses as a whole have a tough job and that they do it well, but occasionally we run into one who does that job just a little bit better than most . . . Nicest stewardess we have ridden with recently is Miss S. N. Eyre of Colonial Airlines . . . She was on the ball every minutes and made our Washington-Montreal trip very enjoyable . . .

Part of Trans-Canada Air Lines' route is from Lethbridge to Vancouver . . . There are some pretty hefty hills up in that country and some pretty strong winds . . . The Lethbridge-Vancouver scheduled time is two hours 50 minutes and the average altitude 12,000 to 16,000 ft. . . But a couple of months ago, TCA flight reports showed that one captain had taken four hours 27 minutes to make the trip, another four hours 30 minutes and still another four hours 52 minutes . . . Practically every one of these flights, the story goes, was made in the vicinity of 20,000 ft. at a ground speed of from 95 to 120 mph . . . No wonder pilots on that sector of TCA's route are known as the "Hump" captains! . . .

ERIC BRAMLEY.

In a comfortable
hurry — at 200 mph



Travel time can be productive time for the executive who owns or flies in a Beechcraft Model 18. Your unfinished problems need not be left behind in the office; they can be considered calmly while your Beechcraft smoothly carries you at 200 miles an hour toward your next engagement.

Miles become measured in minutes rather than hours. An 800 mile trip as part of a normal day is practical, not unthinkable, and you find it possible to make more "on the spot" decisions. Your travel is correlated with your work, rather than dependent on the rigid schedules of other transportation methods.

At the end of a busy day in which your Beechcraft complements your other modern business equipment, you are still relaxed, and ready to join your friends for an evening of entertainment.

Write today—Facts, figures, and demonstrations
are available without obligation.



Beech Aircraft

THE WORLD IS SMALL
WHEN YOU FLY A BEECHCRAFT



CORPORATION
WICHITA, KANSAS, U. S. A.

Airline Personnel

Administrative

D. G. Richardson, veteran aviation executive, who joined Chicago & Southern at Memphis, June 1, has been appointed assistant to **Harvey L. Williams**, v.p. Richardson will be in charge of development of the C&S Caribbean routes.

Robert W. Tuttle, who has been assistant to the v.p. of the eastern region of American Airlines, heads a newly created post as special representative in the properties department of the New York-Newark area. **James L. McEvoy** has been appointed to a similar position in the central region, in Chicago and Detroit.



Muhlfeld Woodhead Steele

Richard E. Fell, eastern region v. p. of PCA has announced the appointment of three new district general managers. **R. E. Probst** assumes the head post at Williamsport; **W. J. Bowen** takes over at Erie, and **Bruce Simpson** will head the Elmira-Corning area.

John Keebler is now executive assistant to **Herbert C. Dobbs**, v.p. traffic for National Airlines at Miami. **Park Wright III**, has been appointed executive assistant to **Thomas A. Prevost**, assistant v.p. in charge of the New York area.

H. P. Hallock, formerly assistant to **M. D. Miller**, Regional v.p. of American Airlines at Dallas, has been appointed District Sales manager for the Knoxville area.

Traffic & Sales

Irene F. Kulback, Pan-American stewardess has been selected by the international airline to present, on behalf of the American people, gifts of clothing and food to the first child born to survivors of Lidice. Presentation will be made during ceremonies marking the first commercial airliner into Prague.



Harkins Hallock Farley

Lee L. Jones is the new station manager for Mid-Continent at Muskogee, Oklahoma. Announcement of the appointment was made by **Jack W. Seay**, Superintendent of Stations.

John E. Muhlfeld has been named traffic manager of the Latin-American division of Pan-Am. His new duties will call for a transfer from New York to Miami.

J. H. Carmichael, executive v.p. reports PCA is taking on many veterans of the Army and Navy flying branches. Included in the latest roster are **Melvin Alkema**, **S. F. Bus, Jr.**, **Miles Matousek**, **Jackson E. Pierce**, **Bruce L. Mathis**, **Richard S. Johnson** and **Richard B. Smith**; all assigned to Washington. Pittsburgh assignments include **Emmett P. Davis**, **David L. Hand** and **Louis F. Abel**. The Detroit roster includes **Malcom E. Starkloff**, **Morgan Fred Edwards** and **Leonard F. Davis**. **Floyd Benjamin** goes to Milwaukee and new names on the New York payroll include **Chester S. Franecke**, **Anton J. Armbruster**, **Frederick M. Warner**, **Lawrence Henry Tate**, **John C. O'Brien** and **John H. Luchow, Jr.**

L. D. "Pat" Carlson has been appointed division superintendent and chief pilot for the inland division of Western Air Lines. His headquarters will be in Denver. Carlson will have as his assistant superintendent, **Frank Eastman**. **Bert Mooney**, former division chief pilot has been advanced to superintendent of Division Two, with offices at Salt Lake City.



Breeden Kruidenier Metzger

Marshall A. Wooster, WAL chief test pilot at Los Angeles is substituting for **Fred W. Kelly**, chief pilot who has been granted a 60-day leave of absence.

Dudley M. Steele, nationally known airport management authority, has joined PCA as airport consultant. He moves from the Lockheed Terminal at Burbank to the Willow Run Airport which went into commercial operation, June 15.

Charles E. Beard of Braniff Airways has announced the appointment of **P. Howard Farley** as superintendent of training. Farley will concentrate on the airline operations education of returned veterans.

Charles F. Waits, former superintendent of maintenance procedure for American Airlines has been named director of maintenance and overhaul. He replaces **M. E. Dubuy**.

Thomas Breeden, Jr., formerly of the traffic office of EAL at Atlanta has been appointed city manager for the Eastern offices in the Greensboro-High Point area. **Robert Kruidenier**, also of the Atlanta office has been named sales representative for the new EAL office at Montgomery.

Andrew B. Newcome of New York, formerly with ATC has been named New England director of regional passenger sales for American Airlines. Newcome formerly served in sales capacities for AA at New York and Buffalo.

D. T. Metzger, formerly of the PCA staff at Washington, has been named general manager for the office at Elizabeth City, N. C. Metzger recently has been serving as station and ground manager at the North Carolina stop.

Shylie McMillion has been named supervisor of cargo sales for United Air Lines at Chicago. **C. H. Bennett** has been transferred from Oakland to San Francisco as chief of cargo sales for United. **Anthony J. Schoepf** has been promoted to assistant district traffic and sales manager at Los Angeles. He is succeeded as traffic representative at Long Beach by **J. B. Miller**.

O. T. Williams, 17 year veteran with United Airlines, has been named operations manager for the new UAL service between Los Angeles and Santa Catalina Island. Williams has been Salt Lake Station manager for the past four years.

Mart I. Fowler has been named to supervise the Government sponsored training of veterans in the program involving 1500 PCA employees. First phases will affect personnel in ground operations, station sales and traffic departments throughout the system and coordinated from the Washington office.

Miss E. Roddick Roberts, formerly passenger relations manager for TACA in New York has resigned to open her own travel agency. Before joining TACA, she was with Trans Canadian Airlines in Toronto.

George P. Brown has been appointed regional sales manager in Boston for Northeast Airlines, according to **Warren H. Smith**, general sales manager.

W. E. Parker, former district sales manager for C&S at New Orleans now heads the newly created position of agency and interline manager for the system. **John D. Locke** succeeds him at New Orleans. **W. E. Curtis**, former C&S station manager at Detroit has been appointed assistant superintendent of stations for the line.



Adamson Williams McMillion

Theodore C. Pelikan has been named assistant to the PAA advertising manager for the Latin American division. A 10 year PAA veteran, he was former traffic manager in Guatemala.

Robert N. Buck of TWA has been awarded the Air Medal by **Gen. Ira C. Eaker** of the AAF, for his piloting experiments with an Army B-17. Buck, during leaves from the airlines, braved the most adverse meteorological conditions ever encountered by a pilot, to compile storm weather data and radio static information.

Daniel J. Harkins, formerly a Commander in the Navy, and expert in foreign travel, has been appointed assistant traffic manager of the Atlantic division of Pan American Airways.

Mrs. Jo Ford Adamson, fashions and merchandising expert, has joined PCA. She will direct the new department of women's events and serve as air travel consultant.

Marvin Horstman has replaced **Roger Don Rae** as superintendent of flying for central operations section of TWA. Rae has returned to regular flying status.



Schoepf Miller Bennett

Ross Byers has been appointed superintendent of passenger relations for Braniff Airways. **A. S. Aldridge**, passenger service manager, announced Byers new post after the former employee returned from four years service with the Navy.

Albert M. Hage has been transferred to Washington to serve as district cargo sales representative for American Airlines. He replaces **Harold F. Zink**. **Jerry Powers**, war vet, also goes to Washington as agency representative for AA.

John F. Woodhead, who joined Northwest Airlines in 1932, at the age of 17, has been appointed Operations Manager. He was formerly chief pilot of the Northern Region. Woodhead will work with **W. Fiske Marshall**, v.p. operations.

FOR SALE—

Noorduyn Norseman

Factory Rebuilt - NC 33177

Model UC 64-A Converted to 1946 Norseman V

Equipped for Air Pick-Up and/or Passenger Service

Licensed and Certificated for Air Carrier Operations

Twin Controls—Wasp R-1340, 600 H. P. Engine

Hamilton Standard Constant-Speed Propeller

Aircraft equipped for Air Pick-Up Operation, including AAS-4 Air Pick-Up Unit, Mail and Cargo Bins, 6-place. With Air Pick-Up Equipment Removed—8-place.

Total Plane Hours 159:02

Since Factory Rebuild 145:02

Total Engine Hours 165:02

Since Factory Rebuild 145:02

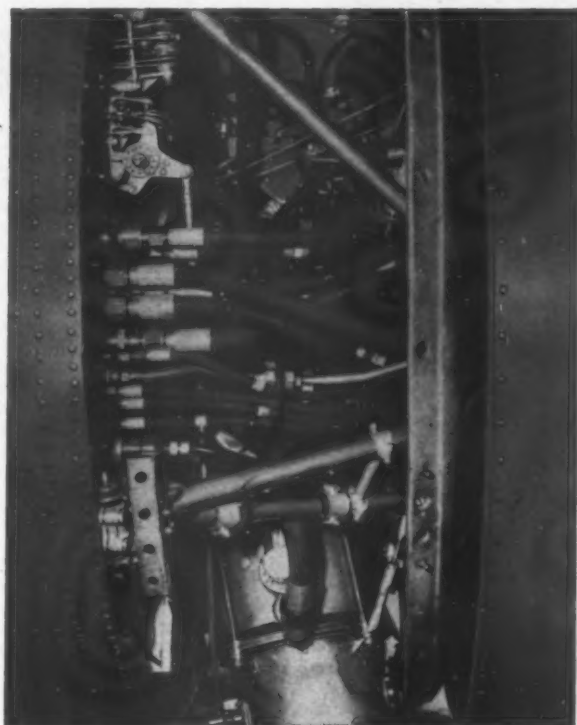
Hand-Rubbed Red Finish

All American Aviation, Inc.


210 Greenhill Avenue
Wilmington 99, Delaware

"Operators of the Air Pick-up System"

AEROQUIP FLEXIBLE HOSE LINES **FOR** **POWER PLANT PLUMBING**



**TYPICAL AEROQUIP HOSE LINE INSTALLATION
IN ENGINE NACELLE OF A DOUGLAS DC-3**

 **AEROQUIP approved Fire Resistant Flexible Hose Assemblies are now extensively used by leading U.S. Air Carriers because of these advantages:**

1. GREATER SAFETY . . .

Fire resistant hose with 50% less joints. Metal fatigue failures eliminated.

2. LOWER MAINTENANCE COST . . .

Less chance of damage to fewer parts. Engine change time reduced by more than one-half hour. Over forty man-hours saved per engine overhaul. Service check time reduced.

3. LIGHTER WEIGHT . . .

Average saving of approximately five pounds per engine.

4. LONGER LIFE . . .

Detachable, re-usable hose fittings. Flexible Hose eliminates bending and annealing of rigid tubing.

Pictured above is an installation of Aeroquip Fire Resistant Flexible Hose Lines and Self-Sealing Couplings in the Engine Nacelle of a Douglas DC-3. Similar installations made by AA, BNF, CAI, DAL, EAL, NAL, NWA, PAA, PCA, WAL, as well as many foreign air lines have proven so satisfactory that several of these transportation companies are converting their entire fleets.

**The broad experience and technical assistance of our
Engineering Service Department are yours for the asking.**

AEROQUIP CORPORATION
JACKSON, MICHIGAN, U. S. A.

Board Questions Legal Status Of Agencies As Air Transport Bookers

The question of the legal status of forwarders of air cargo or air express as well as persons arranging air transportation for others, such as travel agencies or bureau, was specifically raised by the Civil Aeronautics Board's recent opinion on non-scheduled air transportation. In that opinion the Board emphasized that its so-called Non-Scheduled Exemption Order (Economic Regulation 292.1) specifically did not apply to forwarders and agents, who, although they do not perform air transportation directly, are nevertheless under CAB's jurisdiction as indirect common carriers by air.

The Board's view on the status of freight and express forwarders was made clear in 1942, in a proceeding known as the Universal Air Freight Investigation. The status of travel agents and bureau, however, has yet to be sharply defined. In the Universal Air Freight Investigation a company which had been operating as a consolidator of air express packages which it later shipped by air through the Railway Express Agency was found by CAB to have been an indirect air carrier. Because it had never applied for and did not hold a certificate of convenience and necessity, the Board further found that its operations, even through conducted through the Railway Express Agency as an intervening carrier, were in violation of the Civil Aeronautics Act, and a cease and desist order was issued.

In that case the Board also refused to permit Universal Air Freight to continue its business under an exemption order, remarking that exemptions were to be issued "only where compelling reasons of public interest demand" them.

At present, therefore, it appears that no uncertificated person or company can act legally as an air freight forwarder or consolidator of shipments to be handed directly by an airline or through the Railway Express Agency. That such operations exist at present is known to CAB, although it has not as yet instituted any enforcement proceedings under the Act. Numerous applications for freight forwarders certificates are on file with the Board, and a prehearing conference on a number of them was originally set up in March. However, at the request of several

Wins Legal Round

Pan American Airways said the Second District Court of Mexico has upheld the action of the Secretary of Commerce of the Mexican government in cancelling the permit of Aerovias Braniff to operate air transport service between Merida, Mexico, and Havana, Cuba.

Aerovias Braniff has taken an appeal to the Supreme Court of Mexico. The appeal is still pending and while it is pending, Aerovias is forbidden to fly the route. The docket of the Mexican Supreme Court is said to be two years behind, hence it may take that length of time for a ruling in the matter. Compania Mexicana de Aviacion, a Pan American affiliate, brought the action on the basis of rights contained in a prior grant.

Braniff officials stated that other than to carry company equipment, the route has never been operated as a commercial air transport service.

of these applicants, the conference and all further procedural steps have been indefinitely postponed.

The Board has never attempted to define the status of travel agents and bureau under the Civil Aeronautics Act, but the fact that it mentioned them specifically as not eligible to exemption under the Non-Scheduled Exemption order is being interpreted to mean that CAB may eventually undertake either to exempt or regulate such activities.

CAB Activities

By Daniel S. Wentz II

Air France Permit—Air France, an international carrier largely controlled by the French government, was issued foreign air carrier permits by CAB last fortnight authorizing services from France to four U. S. cities. One route granted extends from France via Newfoundland and Eire to the co-terminals Boston, New York and Washington. Another permit gives the French carrier entry to Chicago, with permission to serve Montreal enroute. The Board also issued Air France a permit to allow it to serve San Juan, Puerto Rico as an intermediate point on a Caribbean route between Martinique and Haiti which will touch a number of intermediate islands. The fourth route authorized to the line extends from Indochina to Manila,

Philippine Islands, via Hong Kong and points in China. The latter permit terminates on July 4, when the Philippines are to become independent, and Air France's right to fly into Manila must then be secured from the Philippines Government. All permits were based on the U. S.-French reciprocal Air Transport Agreement of March 27, 1946. Paris-New York service was scheduled to begin June 24.

Simplify Procedures—The Board took further steps toward simplifying its procedures and bringing its individual members in closer contact with the actual problems and progress of its subordinate administrative divisions by assigning each member to a particular bureau. Chairman James M. Landis and Vice Chairman Oswald Ryan will be responsible, with co-equal authority, for the General Counsel's office, the Public Information Section, and the Office of the Secretary of the Board. CAB members Harlee Branch and Clarence M. Young will have personal charge of the Board's Economic Bureau and its Alaska Office. The Office of Trial Examiners was assigned to Members Josh Lee and Harlee Branch, and the Safety Bureau to Members Young and Lee.

Ryan Speaks Out—CAB's Vice-Chairman Oswald Ryan, speaking before the New Orleans Association of Commerce, strongly advised steamship interests who have been refused certificates for airline operations to carry their complaints to the U. S. Circuit Courts of Appeals. Ryan pointedly remarked that no surface carrier had ever appealed a decision of the Board denying its application to any Court. He suggested that a Court test of the validity of CAB's interpretation of the Act would settle once and for all the charge that the Board has misconstrued the intent of Congress by refusing the surface interests entry into air transport.

Accident Releases—Two accident reports released by Board last fortnight indicate that Pennsylvania-Central Airlines' accident at Birmingham, Ala., on Jan. 6, 1946, and Eastern Air Lines' crash at La Guardia on Dec. 30, 1946, were both caused by pilot error. Eastern's accident, the Board said, resulted from the pilot's decision to attempt a landing from an approach that was both too high and too fast. The report on the PCA accident listed the probable cause as the action of the pilot in committing himself to a landing from an approach which was too high and too fast. Both mishaps occurred in poor weather conditions. Investigations showed no mechanical failure.

Want More Service—Airline Attorneys have been calling the Boston-New York-Atlanta-New Orleans case, on which Civil Aeronautics Board examiners have already completed two weeks of hearings, the most important new route proceeding since the Seaboard Case of 1944 in which National Airlines was granted its New York route. Possible new trunk routes connecting the Gulf cities with New York and New England are the stakes for which nearly every major carrier east of the Mississippi is contending, and the hearings have been unusually hard-fought throughout.

The usual city witnesses struck a new note early in the case when a number of them added to their familiar pleas for "more air service" several serious accusations that Eastern Air Lines' service had been inadequate to meet their traffic needs.

PHONE ◀ - - - - - ▶ WIRE ◀ - - - - - ▶ WRITE

AIRCRAFT COMPONENTS CORPORATION

213 King Street

Phone Alexandria 0907

Alexandria, Va.

Authorized Agent for War Assets Administration

ACCESSORIES • • PROPELLERS • • SPARK PLUGS
AND RELATED ITEMS

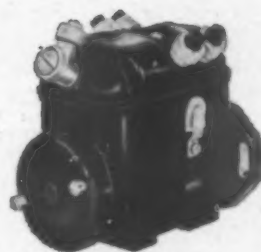
Large Stocks on Hand—Available at War Assets Administration Prices



EVERY AIRLINE IN THE UNITED STATES USES SCINTILLA AIRCRAFT MAGNETOS

As competition increases in air transportation, with consequent lowering of freight and passenger rates, operating economy becomes increasingly important. *And that's where Scintilla* Aircraft Magnetos prove their value.* Scintilla's constant hot, rich spark fires with the utmost efficiency every drop of fuel—a fact attested by Scintilla's outstanding record on long-range aircraft everywhere. For original equipment or replacement specify Scintilla—world-standard in its field.

*TRADEMARK



CHECK THE MAGNETO

Only the best is good enough for this vital part of a plane—and Scintilla has delivered the right spark at the right time for more miles than any other make of ignition.



SCINTILLA MAGNETO

DIVISION OF BENDIX AVIATION CORPORATION

CAB Proceedings

(A Summary of Applications Filed, Orders Issued, and Future Actions of the Civil Aeronautics Board.)

Applications:

Aerovias Venezolanas, S. A., Edificio Phelps, Caracas, Venezuela, for a foreign air carrier permit authorizing mail passenger and property service over three routes totalling 1045 miles, between Maracaibo, Ven., and Miami (235 miles); Maiquetia, Ven., and Miami (336 miles); and between Maracaibo, Ven., and San Juan, Puerto Rico (494 miles). (Docket 2318).

Air Lanes Service, Inc., 1202 Engineers Building, Cleveland, Ohio, for a certificate authorizing the applicant to operate as an express air forwarder over the lines of existing air carriers. (Docket 2327).

Chicago and Southern Air Lines, for an exemption order authorizing service to and from El Dorado, Ark., pending final decision in the Mississippi Valley Case. (Docket 2333).

Essair, Inc., 3300 Love Field Drive, Dallas, Texas, for an exemption order authorizing a supplemental daily route trip between Houston and San Angelo via Austin, Texas, on the company's Route 64. (Docket 2323).

Florida Airways, Inc., Orlando, Fla., for an amendment to the certificate of Thomas E. Gordon, d.b.a. Orlando Airlines for Route 75 to include Leesburg, Fla., as an intermediate point between Orlando and Ocala. (Docket 2328).

Interurban Airlines, Inc., 1639 Broadway, New York, N. Y., for a permanent or temporary certificate authorizing scheduled mail, passenger and express service by helicopter between New York and Atlantic City, N. J., Reading and Scranton-Wilkes-Barre, Pa., Port Jervis and Kingston, N. Y., Hartford, Conn., Montauk, L. I., N. Y., and thence to and from ships at sea to facilitate the delivery of incoming mail to New York. (Docket 2329).

KLM-Royal Dutch Air Lines, 521 Fifth Avenue, New York 17, N. Y., for a permanent foreign air carrier permit authorizing scheduled mail, passenger and property service between Amsterdam, the Netherlands, and Curacao, N. W. I., via New York, with stops enroute on all or some flights at one or more of the following points: airports in Great Britain, Eire, Newfoundland, Nassau, Cuba or Jamaica. (Docket 2324).

Richard S. Leghorn, 813 Southwestern Life Building, Dallas 1, Texas, for a permanent or temporary certificate authorizing scheduled mail and property pick-up service over 18,502 miles of routes in Texas, Oklahoma, Kansas, New Mexico, Louisiana, Colorado, Missouri, Tennessee, Mississippi, Illinois, and Arkansas. (Docket 2331).

Lone Star Air Cargo Lines, 3110 Love Field Drive, Dallas, Texas, for a permanent and/or temporary certificate authorizing scheduled property service between Fort Worth-Dallas and Alice-Laredo, Texas, and on two routes between Fort Worth-Dallas and Newark, N. J., both via various intermediate points. (Docket 2326).

Monongahela Valley Airways, Inc., 213 Bellevue Avenue, Fairmont, W. Va., for a certificate authorizing scheduled mail, passenger and property service over a 63-mile route between Fairmont, W. Va., and Pittsburgh. (Docket 2330).

Orlando Airlines, (Thomas E. Gordon, d.b.a.) 45 East Washington Street, Orlando, Fla., for approval of the transfer of the certificate of convenience and necessity issued in Gordon's name to Florida Airways, Inc., a Florida corporation. (Docket 2314).

Pacific Air Lines, 7000 Hollywood Boulevard, Los Angeles 28, Calif., for a permanent or temporary certificate authorizing scheduled mail, passenger and property service between Los Angeles and Shanghai via San Francisco, Honolulu, Johnson Island, Kwajalein, Guam, Manila, P. I., and Hong Kong. (Docket 2320).

Pacific Air Lines, 7000 Hollywood Boulevard, Los Angeles 28, Calif., for a permanent or temporary certificate authorizing scheduled mail, passenger and property service between Los Angeles and Mexico City via El Centro, Calif., and Guaymas, Mazatlan and Guadalajara, Mexico. (Docket 2321).

Pacific Air Lines, 7000 Hollywood Boulevard, Los Angeles 28, Calif., for a permanent or temporary certificate authorizing scheduled mail, passenger and property service between Seattle and Tokyo via Whitehorse, Kodiak, Unalaska and Kiska, Alaska, and Petropavlovsk, Kamschatka, U. S. S. R. (Docket 2322).

Prairie Airways, Incorporated, Alliance, Nebraska, for a permanent or temporary certificate authorizing scheduled mail, passenger and property service on two alternate routes totalling 915 miles between Scottsbluff and Omaha, Neb., via various intermediate points. (Docket 2315).

Transcontinental & Western Air, Inc., for a change in its approved service plan for foreign air transportation to include Milan, Italy, as an intermediate point between Geneva, Switzerland, and Rome, Italy. (Docket 2325).

U. S. Airlines, Inc., First National Bank Building, St. Petersburg, Fla., for a certificate authorizing scheduled property service between the following air freight areas within the continental United States: Northwest area, California area, Texas area, Louisiana area, Southeast area, North Central area, and Northeast area. (Docket 2316).

Calendar:

July 1—Exchange of exhibits in the Arizona-New Mexico Case. (Docket 968 et al.) Postponed from June 15.

July 5—Oral argument in the American Airlines-Mid-Continent Airlines Acquisition Case. (Docket 2068). 10 a. m., e.s.t., Room 5044, Commerce Building.

July 8—Hearing in the Eastern Air Lines-Delta Air Lines Consolidated Route Consolidation Case. (Dockets 1971 and 2288). Examiner J. Earl Cox. Postponed from June 24.

July 22—Rebuttal exhibits in the Arizona-New Mexico Case due. (Docket 968 et al.) Postponed from July 5.

Aug. 12—Hearing in the Arizona-New Mexico Case. (Docket 968 et al.) Postponed from July 22.

Sept. 9—Hearing on applications proposing mail and property service by helicopter in the Los Angeles metropolitan area. (Docket 896 et al.) Examiner Ferdinand D. Moran. Postponed from July 10 at the request of the Post Office Department.

Orders:

4798—Permitting the chamber of commerce of Birmingham, Alabama, to intervene in the Boston-New York-Atlanta-New Orleans case. (Docket 730 et al.)

4799—Authorizing Western Air Lines to operate non-stop between Idaho Falls, Idaho, and Ogden, Utah, on Route 19.

4800—Permitting American Airlines to operate non-stop between New York, N. Y., and Rochester, N. Y., on Route 7.

4801—Vacating the Board's order in the Latin American case (Docket 525 et al.) insofar as that order granted or purported to grant a certificate for a Los Angeles-Mexico City route to Pan American Airways as well as to Western Air Lines, and correcting the clerical error which inadvertently had indicated the issuance of certificates to both carriers.

4802—Authorizing the Decatur Park District, the City of Decatur, Ill., and the Association of Commerce of Decatur to intervene in the Great Lakes area case. (Docket 535 et al.)

4803—Authorizing all holders of certificates of convenience and necessity to perform any emergency on-line air service required for the duration of the railway strike.

4804—Authorizing Pan American Airways, by temporary exemption order effective from and after May 24, 1946, to serve London, England, through Heathrow Airport in lieu of Croydon and Southampton as named in its permanent certificates, or Hurn and/or Bovingdon hitherto approved by temporary exemption order. (Docket 2279).

4805—Denying American Airlines petition for leave to intervene in the Arizona Airways-TWA Route 38 Purchase Case. (Docket 2005).

4806—Cancelling the temporary exemption order under which CAB had authorized all domestic air carriers to perform emergency services during the railway strike period.

4807—Permitting the Chattanooga (Tenn.) Chamber of Commerce to intervene in the Boston-New York-Atlanta-New Orleans Case. (Docket 730 et al.)

4809—Approving interlocking relationships resulting from the holding by William Tudor Gardiner of a directorship in Northwest Airlines and the position of Chairman of the Board of the Pacific Coast Company. (Docket 2112).

4810—Authorizing Delta Air Lines to operate non-stop between Shreveport and Baton Rouge and between Alexandria and New Orleans, La., on Route 24.

4811—Consolidating the application of G. I. Airlines in Docket 2260 for hearing with the Chicago-Seattle Case. (Docket 1602 et al.)

4812—Permitting Delta Air Lines to operate non-stop between Chicago and Knoxville on Route 54.

4815—Authorizing Pan American Airways to serve Montevideo, Uruguay, through the use of Carasco Airport in lieu of Melilla Airport.

4816—Permitting Pan American Airways to serve Suva, Fiji Islands, through the use of Nausori Field, subject to the permission of the War Department.

4817—Authorizing Delta Air Lines to operate non-stop between Augusta, Ga., and Charleston, S. C., and Atlanta, Ga., and Columbia, S. C., on Route 24, and between Augusta, Ga., and Jacksonville, Fla., on Route 54.

4827—Approving interlocking relationships resulting from the holding by Leigh R. Powell, Jr., of a directorship or alternate directorship in the Railway Express Agency and directorships and/or offices in a number of railway, steamship and terminal companies. (Docket 2283).

4828—Approving interlocking relationships resulting from the holding by F. D. Lemmon of a directorship or alternate directorship in the Railway Express Agency, Inc., and directorships and/or offices in a number of railroad, steamship and terminal companies. (Docket 2208).

4829—Approving interlocking relationships resulting from the holding by C. W. Van Horn of a directorship and/or office in the Railway Express Agency, Inc., and directorships and/or offices in a number of railway and terminal companies. (Docket 2270).

4830—Approving interlocking relationships resulting from the holding by Golder Shumate of a directorship and/or office in the Railway Express Agency, Inc., and directorships and/or offices in a number of railway and terminal companies. (Docket 2269).

4831—Dismissing the application of New England Airlines, Inc., in Docket 692 at the company's request.

4832—Authorizing United Air Lines to operate non-stop between Sacramento, Calif., and Elko, Nev., on Route 1.

4833—Denying a petition of the City of Shreveport, La., for permission to intervene in the Boston-New York-Atlanta-New Orleans Case. (Docket 730 et al.)

4834—Permitting Eastern Air Lines to operate non-stop between Birmingham, Ala., and Washington, D. C., on Route 5.

ESTABLISHED 1923

U. S. EXPORT LICENSE NO. 191

Frank Ambrose Aviation Co.

10-6 UTOPIA PARKWAY, WHITESTONE, L. I., N. Y.

AGENTS FOR

WAR ASSETS ADMINISTRATION

Frank Ambrose Aviation (Canada) Ltd., Room 303 Ottawa Electric Bldg., Ottawa, Canada

Frank Ambrose Aviation, S. A., Panama City, R. P.

WORLD WIDE AGENCIES ON ALL CONTINENTS

WORLD WIDE DISTRIBUTORS OF
MULTI-ENGINE TRANSPORT TYPE AIRCRAFT,
ENGINES, ACCESSORIES AND PARTS

AVAILABLE SUBJECT TO PRIOR SALE

3—Lockheed Hudson Mark VI - P. W. 1430-67 Engines
36—PSY-SA Amphibians 3—Widgeons 11—Lockheed Venturas
3—Twin Beech 1—Lockheed 14 1—Lockheed 18A

New ART 13 VHF Transmitters

New floats for Noorduyn Norseman complete with all fittings

WE HAVE LARGE STOCKS OF ENGINES, ACCESSORIES AND PARTS



Lunch in San Francisco—dinner in Hawaii

Week-end at Waikiki

ABOVE the Golden Gate, the world's fastest, most comfortable passenger plane flashes out over the Pacific.

Aboard a Boeing Stratocruiser travelers will take off from San Francisco in the afternoon—sight Diamond Head the same evening! They can spend the whole of a wonderful week-end in Hawaii (or London, or Stockholm) and be home again on Monday if they like!

That's just one of the amazing travel possibilities opened up by this first true super-transport of the new air age. It not only flies faster—at 300 to 350 miles

an hour—but offers luxuriously spacious surroundings. Passengers have the advantages of smooth flight at over-weather altitudes, yet breathe perfectly conditioned air, always kept at comfortable, near-sea-level pressure.

The Stratocruiser brings to commercial flight the outstanding performance, safety and dependability you would expect from Boeing—designer and builder of the B-17 Flying Fortress and the great B-29 Superfortress. Boeing Airplane Company, Seattle, Washington; Wichita, Kansas.



BOEING
STRATOCRUISER

The Stratocruiser's unequalled speed, comfort and reliability will soon be available on these forward-looking airlines—Pan American World Airways, Swedish Intercontinental Airlines, Northwest Airlines,

American Overseas Airlines—for which Boeing is building fleets of these super-transport

NEW SERVICES:

WAL Inaugurates Flights To Park Areas

Western Air Lines was scheduled to inaugurate service to Jackson, Wyo., July 1 and to Cedar City, Utah, July 15—thus offering for the first time direct flights to two national park areas. Jackson is the gateway to Grand Teton National Park, and Cedar City is the hub of Zion, Bryce and Grand Canyon national parks.

• American Airlines added two daily non-stop flights between New York and Detroit, effective June 15. One of the flights continues on to Chicago. DC-3 equipment is being used.

• Braniff Airways inaugurated service to Muskogee, Okla., June 15, on the carrier's Denver-Memphis route. An additional round-trip between Dallas, Oklahoma City and Tulsa and between Corpus Christi and Dallas was instituted at the same time.

• Mid-Continent Airlines inaugurated service to Muskogee, Okla., June 15.

• United Air Lines will inaugurate scheduled flights between Los Angeles and Santa Catalina Island on or about July 1 with DC-3s. The CAB recently approved United's application to lease the Los Angeles-Santa Catalina certificate from Catalina Air Transport, pre-war operator of the service.

• Eastern Air Lines added daily round-trip service with DC-4s between New York and Brownsville, Tex., new DC-3 service between Detroit and New Orleans, new service between New Orleans and Louisville, a 7th roundtrip between Atlanta and Chicago, an 11th round-trip between New Orleans and Atlanta.

• Colonial Airlines inaugurated daily service to Watertown and Massena, N. Y., on its New York and Washington to Montreal and Ottawa service.

• Pennsylvania-Central Airlines inaugurated DC-4 service to Knoxville, began "every hour on the hour" flights between Detroit and Cleveland and added new schedules between New York-Newark and Pittsburgh, new evening services between Washington and Pittsburgh and between Baltimore and Pittsburgh. The carrier took over commercial operation of Willow Run airport, near Detroit, June 15.

• American Airlines increased its passenger seats on the New York-Boston run by 117 each way with the addition of four DC-4 round-trip flights daily. Three of the flights replace former DC-3 operations. Two of the



Seven-Ton Air Shipment—Photo shows the interior of an American Airlines airfreighter loaded with the shaft of a stone crusher, flown recently from Milwaukee to Newark, N. J. The shaft weighed seven and a half tons. Because it represented such a heavy concentration of weight at one part of the DC-4, a wooden platform was built to distribute the weight evenly at 150 pounds per square foot.

Flying Chef

They're adding a new member to the crew of PCA Capitaliners. He will be the flying chef, presiding over the electric ovens and steam tables in a roomy galley, forward of the passenger cabin of the four-engine Douglas transports. Elaborate menus, made possible by the adoption of frozen foods, are to be features of the PCA service.

flights from New York originate at Washington, D. C.

• Northeast Airlines New York-Boston service was switched to DC-4 equipment exclusively. The company said that the 60-passenger DC-4s had increased its seat capacity by more than 70%. Northeast also increased to eight the number of daily flights on its new New York-Worcester-Lawrence-Portland run.

• American Airlines reestablished three daily round trips between New York and Albany and added a daily round trip between New York and Rochester and New York and Syracuse.

• Delta Air Lines inaugurated non-stop DC-4 service from New Orleans to Dallas-Ft. Worth, and a second DC-4 round-trip between Chicago and Miami, via Atlanta, Savannah and Jacksonville. Several DC-3 shuttle flights out of Atlanta also were added.

Supreme Court Will Test CAB Power Next October

The first Supreme Court test of the scope of the Civil Aeronautics Board's powers under the Act is now scheduled to occur sometime during the October, 1946, term of the court which has granted petitions for writs of certiorari in the lengthy and complex litigation known as the Panagra Terminal Case. (CAB Docket 779.) Pan American Airways and Eastern Air Lines both asked for Supreme Court review of the decision of the U. S. Circuit Court of Appeals for the Second Circuit of Feb. 25, 1946, in which the Circuit Court remanded the Panagra Case to CAB for further action to determine whether Panagra's inability to apply for a route into the U. S. resulted from "fraud" by another stockholder. The Circuit Court also held that if CAB found that "fraud" had occurred, it should consider the case as if begun by a voluntary application. Both Pan American and Eastern maintain that this decision by the Circuit Court is erroneous.

SUMMARY OF U. S. DOMESTIC AIR TRANSPORT OPERATIONS FOR March, 1946
Compiled by American Aviation Publications from Official C.A.B. Data.

REVENUES
&
EXPENSES

AIRLINE	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & PROPERTY EXPENSES	OPERATING REVENUE PER REV. MILE	OPERATING EXPENSE PER REV. MILE	NET INCOME BEFORE TAX	NET PROFIT OR LOSS	TOTAL ASSETS
All American	\$ 58,406	.....	\$ 57,806	\$ 315	.....	\$ 61,711	\$ 31,425	\$ 30,285	\$1.79	\$4.14	\$ -8,280	\$ -4,968	\$ 1,716,807
American	4,318,866	3,720,129	283,179	146,490	95,830	4,489,947	1,576,502	2,909,444	90.64	94.34	-360,921	-167,394	75,718,609
Braniff	752,269	662,900	36,722	19,427	\$410.	796,070	311,338	484,732	85.34	90.34	417	290	9,387,498
Caribbean	2,248	20,670	1,212	943	.....	35,178	14,660	20,517	87.24	126.54	-11,298	-11,298	164,943
C & S	560,789	523,029	17,713	13,794	.....	568,039	232,270	335,768	87.44	88.54	-8,699	-8,699	4,161,565
Colonial	803,306	198,011	10,470	1,300	.....	239,579	104,390	135,228	85.44	100.64	-36,290	-36,290	3,963,729
Continental	332,494	270,432	26,098	2,299	423	345,535	141,231	204,303	77.74	80.64	-10,635	-6,565	2,538,237
Delta	752,110	647,580	41,173	33,619	.....	716,073	288,442	427,631	97.34	92.64	32,737	18,960	5,900,339
Eastern	2,934,108	2,647,076	132,942	94,302	6,193	2,826,732	947,229	1,909,503	96.14	73.64	689,476	411,476	31,847,143
Exair	39,417	19,626	19,475	130	.....	48,658	23,569	25,092	70.64	62.44	-13,935	-13,935	582,090
Hamilton	807,329	170,482	860	9,642	11,727	160,164	70,634	89,530	175.14	135.24	87,093	87,093	2,062,948
Inland	190,931	79,165	50,563	500	.....	120,841	42,175	78,705	65.34	71.24	-10,132	-10,132	678,999
MCA	366,781	277,443	80,673	5,208	.....	324,928	142,260	182,668	98.44	87.24	40,745	24,656	2,488,142
National	635,795	550,570	36,330	6,135	.....	543,180	266,673	316,507	94.94	87.14	49,712	49,712	5,716,082
Northeast	Report not yet available; Data will be included at a later date.												
Northwest	1,200,121	1,041,696	108,293	27,899	.....	1,334,093	490,824	843,269	91.04	101.14	-136,567	-75,567	13,033,131
PCA	1,260,248	1,178,522	36,938	29,663	.....	1,503,776	589,662	914,113	93.04	110.94	-208,401	191,398	17,589,280
TWA	Report not yet available; Data will be included at a later date.												
United	4,092,490	3,110,309	390,098	63,807	65,169	4,120,078	1,695,886	2,424,192	86.64	87.24	-18,351	220,646	53,027,177
Western	562,239	536,436	26,027	9,000	1,406	709,112	278,158	430,954	87.24	110.04	-149,535	-149,535	5,626,753
TOTALS	18,416,323	15,654,018	1,386,942	448,993	185,560	18,410,154	7,247,284	11,162,861	92.94	92.94	-112,804	479,810	233,426,034

For Continuous Unattended VHF Reception



The Collins 51M

The 51M is the answer to your need for VHF reception or monitoring. It is engineered for continuous operation on a fixed, crystal controlled frequency between 118-132 mc, and can be located at a remote, unattended position. This new VHF receiver provides reliable reception under extreme variations of operating conditions—it incorporates improved protection against humidity and temperature changes, fungus growth, and very strong signals.

The output transformer has a balanced split secondary which can be used for simplex control circuits. Background noises can be effectively suppressed during the absence of a signal, by means of an adjustable carrier operated audio muting circuit.

The 51M has excellent sensitivity at a high signal to noise ratio. The band-width for reception is no less than 55 kc at 6 db attenuation and no more than 160 kc at 60 db attenuation. AVC provides essentially constant audio output. Write today for complete details.

Collins Radio Company, Cedar Rapids, Iowa
11 West 42nd Street 458 South Spring Street
New York 18, N. Y. Los Angeles 13, California

.....IN RADIO COMMUNICATIONS, IT'S...



BETTER

HYDRAULIC PRESSURE STORAGE

For the DC-4 and DC-6 . . . with the
Bendix Pacific 3000 PSI Accumulator



The exclusive design of the Bendix Pacific Hydraulic Pressure Accumulator—with its spherical shell and long-life bladder—gives users of the spectacular DC-4 and DC-6 peak efficiency from the hydraulic system.

Douglas uses two Bendix Pacific 3000 PSI Accumulators to serve the entire hydraulic system, including the operation of cowl and wing flaps and landing gear on these Douglas transports. Tens of thousands of Bendix Pacific Accumulators

have proved their outstanding superiority in fatigue strength due to the one-piece welded spherical shell.

This means greater safety and longer life. Equally important is the fact that the advanced design of the bladder provides for flexing over an extended area, which avoids local failure and increases service life. Inspection and removal of the bladder is quickly done by merely removing the air cap. Detailed specifications of the Accumulator and all other Bendix Pacific products furnished on request.



Cylinders



Hand Pump



Check Valves



Pressure Regulators



Power Brake Valve



Restrictor Valves



4-way Valves



Geneva-lock Actuator



Geneva-lock Operated Valves



Position Light Flasher

Pacific Division

Bendix Aviation Corporation

11600 SHERMAN WAY, N. HOLLYWOOD, CALIF.

HYDRAULIC & ELECTRICAL

EQUIPMENT FOR AIRCRAFT

© 1946, Bendix Aviation Corp.

Consider Appointment Of Aviation Director To Serve Texas City

A director of aviation with an annual salary of \$7500, is being considered for the city of Dallas, according to V. R. Smitham, City Manager. The proposed new post would employ a specialist who would be responsible to Smitham while directing the destinies of both Love Field and Redbird Airport.

It is possible that the new office may be filled from some source other than the ranks of city aviation personnel, Dallas officials said. Meantime, Hart Bowman, Dallas aviation consultant and public relations director will remain in his present capacity and Elgin Crull will serve as acting manager of Love Field until a permanent manager can be found. The Love Field post was made vacant when C. E. Hanst left to become director of aviation at Corpus-Christi.

• Hedberg-Friedheim & Co., is contesting the authority of the Minneapolis-St. Paul metropolitan airport commission which has instituted condemnation proceedings regarding Wold-Chamberlain Field. The condemnation petition has been taken under advisement by District Judge Frank E. Reed. The commission states that the area to be condemned will be used for airport expansion. Hedberg-Friedheim has four years to go on a ten year hangar lease.

• CAA technicians have been aiding South American and Turkish aviation officials in their plans to improve airports and airways. A three man mission is now collaborating with air officials at Bogota, Colombia and another CAA survey group is recording their findings after inspecting current facilities in Turkey and Lebanon.

• Burlington, N. J., Airpark is the newest flying base to be opened in the Philadelphia area. The 2300 ft. runways and a five plane hangar are now available. The field is located on Route 25, about 20 miles from Philadelphia city hall.

• Overseas operators using the marine terminal at LaGuardia Field have appealed to the city aviation officials, stating that volume of traffic has already swamped existing facilities. Unless some means of expansion or additional quarters are provided immediately, these operators predict chaos or possible collapse.

• PCA is banking heavily on other airlines coming into Willow Run airport in the near future, according to Detroit airport authorities, who said the new operators would pay \$350,000 rent annually. Twenty daily flights are scheduled by PCA at Detroit and express bus service to downtown Detroit will be available for 75 cents.



Aviation Country Club—Work has begun at a proposed million dollar aviation center, 15 minutes from downtown Portland, Oregon. The project, complete with swimming pool, tennis courts and nursery, is being built and operated by Skylife, Inc. Peter Vanguard, treasurer of Skylife, got his start after building up a canning business fortune from a \$50 loan.

• Southern Airways, Birmingham, is now in operation at Mobile Airport with Ike F. Jones, v. p., in charge. The company will distribute Beechcraft, Piper and SeaBee aircraft and train war veterans for flying jobs.

• Pine-Air, Inc., is engaged in lightplane sales and charter work at Vidalia, Georgia. Plans for non-scheduled charter service are also included in the expansion program set for 1947 says M. L. Peterson, Jr., pres.

• One row of prefabricated individual hangars, a new administration building and installation of two improved turf runways are being completed at Parker D. Cramer Airport, Clarion, Pa., by operator Wm. Culbertson. A second airport to serve the county seat is being laid out on the Voynick estate, near the Lakes-to-Sea Highway, west of the community.

the Chamber of Commerce is demanding a separate aviation department for Kansas City.

Aviation Programs Increase In High Schools Of Nation

Approximately one half of the nation's high schools are now offering aviation ground courses and, in some instances, such as in Tennessee, actual flight instruction is being afforded select students. The CAA reports that 19 states and the District of Columbia are participating in this educational venture. Another 15 states and Alaska are also making arrangements to take part.

Demands Separate Aviation Direction For Kansas City

Charging that Kansas City is without a definite plan as to either its municipal airport or the Kansas City Grandview Airport, Dorman H. O'Leary, Aviation vice president of the Chamber of Commerce, has demanded that an aviation department, separate from all other municipal branches, be immediately established. In his talk to Kansas City aviation and municipal officials, O'Leary lamented the fact that American Airlines cargo division had adopted Jefferson City, Mo., as its central operating base.

If Kansas City had worked to obtain the AA base, it might have meant a beginning annual payroll of \$750,000, with employment for more than 100 men, according to O'Leary. It is for the purpose of coping with matters of this nature that



GRASS SEED For Air Fields "Known Quality"

TESTED FOR PURITY AND GERMINATION

For over 46 years Stumpp & Walter Co. has been famous for grass seed mixtures of the highest quality, and are responsible for the turf of many of America's finest polo fields, golf courses and air fields.

Write for prices and seeding helps

Stumpp & Walter Co.

Specialists in Grass Seed, Fertilizers and Equipment

132-138 Church St., Dept. AV, N. Y. 8



Bovington Airport—Pictured here is Bovington airport, 10 miles from London, which has been under the jurisdiction of the USAAF since May, 1944. The Air Transport Command is expected to move out of the field about June 15, and it will eventually revert back to the British government. The field has three runways—northeast-southwest 4800 feet, east-west 4200 feet and southeast-northwest 3750 feet. All are 150 feet wide. The airport has been recommended for commercial use. Customs, passenger and hangar facilities are available. ATC photo was taken July 12, 1945.

AMC Begins Service With Huge Backlog Of Contracts

Maintenance On Production Line Basis Inaugurated

WITH a backlog of \$3,500,000 in contracts, written before the company got into operation, the newly organized Aviation Maintenance Corporation opened its doors for business at the former Navy Modification Center at Metropolitan Airport, Van Nuys, Calif., working two shifts with 750 employees. The company anticipates it will have 1,500 employees within three months.

Included in the initial contracts is the conversion of 86 surplus airplanes for Argentina, one of the largest conversion commissions yet signed by any company. Divided three ways between the Argentine Purchasing Commission, the Argentine Naval Commission and Cia Argentina de Aeronavegacion Dodero and approved by the State Department, the contracts involve the modification of 17 C-54's, 31 C-47's and 38 AT-11's.

It is anticipated this commission may be expanded further if the Argentinians can locate additional surplus craft. For example, they took every C-54 at Walnut Ridge, Ark., and indicated they would have taken more if any had been available.

Other groups with whom service or modification contracts have been written include Pacific Air Lines, Trans-Ocean Airline, Eagle Air Freight, Skyfreight, Inter Americas Airways and Trans Caribbean Air Cargo Lines. For Pacific Air Lines, which flies between Los Angeles, San Francisco and Sacramento, AMC will do all maintenance and overhaul work including turn-around inspections.

In taking over the former modification center, which Lockheed operated for the Navy during the war, the Aviation Maintenance Corporation has one of the finest physical set-ups in the country. The main factory area of the 77-acre plant consists of two hangars 160 x 400 feet with 35 foot ceilings and with adjacent shops and offices. In addition, there is a flight building, a warehouse, paint shop, administration building, cafeteria and dormitories for housing transit pilots. More than 2,000,000 square feet of paved outdoor working area for flight line service and aircraft storage provides enough space for 240 airplanes at one time.

The Aviation Maintenance Corporation is occupying the property and buildings under a five-year lease with an option to purchase at a figure approximating \$2,000,000. The machinery, tools, equipment and fixtures, however, were purchased outright from the War Assets Administration. The shop equipment originally was installed under Navy specifications at a cost of nearly \$1,000,000. AMC also purchased raw materials and parts originally valued at nearly \$1,500,000.

The Aviation Maintenance Corporation offers to airlines, contract carriers, fleet operators, government agencies and individual airplane owners complete service in the fields of modification, repair and overhaul, maintenance, parts and supplies and aircraft storage. The new company has been licensed by the Douglas Aircraft Company as an approved modification and repair station for C-47 and C-54 type aircraft. Although much of the work with which the new company is starting operations consists of modification and conversion, the company's aim is to establish itself primarily as a maintenance and overhaul depot for air carriers.

"We are equipped and set up to do a complete job of aircraft maintenance on a production line basis," said Col. John H. Fite, president and chairman of the board of AMC. "We believe our facilities and organization are unique and that our production line methods—sufficiently flexible to permit individual attention to special jobs—will enable us to quote fixed prices for service low enough to compete favorably with any other type of aircraft service organization. For the first time in civil aviation history, aircraft maintenance has been taken completely out of the backyard class and put on an industrial basis."

Col. Fite is a veteran of 18 years service in the Army Air Corps. He was chief of air supply in the Mediterranean Theater during the war. Prior to the war, he was chief of the Technical Data Section at Wright Field.

Vice president and general manager of AMC is August C. Esenwein. Connected with aviation since 1927, Esenwein formerly operated the Buffalo Aeronautical Corporation, was a project engineer for Curtiss Wright and was president and manager of Fabricators, Inc.

North American Has Backlog to Develop Various Military Types

North American Aviation, Inc., has a current backlog of approximately 75-million dollars in unfilled government orders, according to J. H. Kindelberger, president. A recent report disclosed that North American is starting a gradual up-trend with models which were in the design or experimental stage at the close of the war. The backlog does not include orders for the Navion, four-place personal plane, scheduled for mass production by mid summer.

Kindelberger believes the present contract situation will call for an increase in personnel to carry on the experimental and production work now in process. The current North American payroll covers 5000 employees.

The company's backlog approximates 23-millions for experimental work, 13-millions for bombers, nine million for fighters and another million for miscellaneous activities. The government terminated 525-millions in North American contracts at the end of hostilities.

Included in the present contracts are provisions for the production of the P-82 twin Mustang and a secret airplane for the Navy. Four additional military developments have been included with the civilian plane production line as a separate endeavor.

Manufacturing Briefs

● Globe Aircraft Corp. will start production of the 125-hp Swift immediately, following the recent certification of the plane by the CAA. The Swift is rated for a cruising speed of 140 mph, a landing speed of 48 mph, a service ceiling of 16,000 ft. and a range of 512 miles on 28 gallons of gas. Sales price will be about \$4,400.

● Stinson is seeking 500 new workers, preferably veterans, to set up production of the Voyager 150 following settlement of the UAW-CIO strike that tied up production of the plant April 2.

● Aerocna is demonstrating its new low-wing, two-seater, simplified control personal plane, the "Chum" which is expected to go into production late this year.

● CAA has issued a certificate (Aircraft type No. 771) to the Mars Manufacturing Co. of La Mar, Ia., for its Model M1-80, a two-place monoplane, powered by a Lycoming GO-145-C2 engine. Complete specifications are not yet available.

● Despite material shortages, Cessna Aircraft is running a month ahead of schedule with a production of 22 120's and 140's a day. The firm's production is now running more than \$1,250,000 a month. Later in the year Cessna plans to augment its output of two-place planes with a four-passenger all-metal job.

● Auster Aircraft, Ltd., British lightplane manufacturers of Thurston, Leicester, has bought between 150 and 200 Continental engines intended for installation in Auster planes, 90% of which are slated for export, according to the Office of International Trade of the Department of Commerce. The purchase was agreed to by the Ministry of Aircraft Production and the Ministry of Civil Aviation. Auster Company official K. Sharp said, "We cannot get enough light plane engines here (in England), and the 65 and 75 hp engines we are buying from Continental are mass produced and are cheaper."



Leased With Option—Aerial view of mammoth government-owned Republic plant at Farmingdale, L. I. A five year lease agreement, with option to buy, has recently been signed by Republic with the War Assets Administration. Company owned buildings appear in background.



Copyright 1946 Piper Aircraft Corporation

BUILDING MORE PLANES



means building **BETTER** planes that cost **LESS**

SETTLE your family in a new Piper Cub, take to the air smoothly, and sit back for a new experience in travel. You're enjoying the benefits of fifteen years of plane-making . . . of *building more planes* than produced by all other light-plane makers combined.

Consider the price of a Piper Cub—as little as \$665 down—less than any other personal plane. *Building more planes* made this possible . . . Notice how this plane takes off and lands almost by itself, at a safe, easy-going speed. *Building more planes* perfected this safe design . . . And when you set your Piper Cub down after that business or pleasure trip, figure your gas

mileage. Better than the average car! Economy like that isn't found on a drawing board—it's the result of *building more planes*.

See the new Piper Cubs at your dealer's now. The Super Sea Scout, illustrated, is the Super Cruiser with the additional equipment of floats—a three-passenger, 100-horsepower plane with an electric starter. The Special is a two-passenger, 65-horsepower plane—also obtainable with floats. Ask your dealer for a free flight demonstration . . . have him tell you about the convenient payment terms, and the *free flying course* included with the purchase of every new Piper Cub.

LOOK TO THE LEADER

FOR GOOD SAFE PLANES YOU
CAN AFFORD TO BUY AND FLY

PIPER



HERE ARE 3 FINE
AVIATION BOOKS FOR *You!*

1. *Piper Cub Brochure*. Brand new! Beautiful, full-color airplane illustrations, suitable for framing. Complete specifications of Piper Cubs.
 2. *"How to Fly" Book*. Takes you on a typical flying lesson with 53 step-by-step photos and descriptions.
 3. *"What Your Town Needs" Book*. Will help you plan an inexpensive landing area now.
- Get these books from your Piper Cub Dealer now. Or, if you prefer, send us 10c per book or 25c for all three. Use stamps or coins. Specify which books you desire. Write Dept. AA76.

PIPER AIRCRAFT CORPORATION
LOCK HAVEN, PENNA., U.S.A.
In Canada: Cub Aircraft Ltd., Hamilton

DeHavilland Dove Is Britain's First Bid To Feeder Line Operators

Britain's most popular bid for a practical light transport, to be employed for charter and tributary airways, is represented in the DeHavilland Dove. The new twin-engine feeder line plane is reported to offer mainliner features at up-keep expense that will be attractive to new and growing operating concerns. Engineering statistics claim approximately six ton miles of payload per Imperial gallon of fuel.

The DH Dove offers the advantage of a novel tricycle under-carriage with a double track nose wheel tire, preventing shimmy and particularly desirable during cross-wind landings under minimum load conditions. The plane is built low to the ground to facilitate loading, fueling and maintenance. All metal construction, a departure from DH usual designs, was adopted, to make the Dove practical for operation in all climates.

A general contribution to the lightness of the Dove, has been brought about by use of the Redux process. This is a method of cementing metal to metal and wood to metal. In addition to offering a smooth exterior finish, the cost of riveting is eliminated and production man hours are materially reduced.

The Dove is described as an ideal feederline type, from the pilot's point of view. The dual controls are so mounted that a single operator can easily handle



DeHavilland Dove in Flight

the plane as well as the communications. The pilot's seats are mounted high and visibility is materially improved by the installation of a bubble type canopy.

Power for the Dove is supplied by two Gypsy Queen 71 geared and supercharged fuel-injection engines of six-in-line design. Hamilton-type hydromatic and braking propellers of low diameter were adopted due to low engine mountings.

With full tanks, the Dove is reported to have a still air operating range of approximately 1000 miles, suitable for stages of 500 to 700 miles while carrying six passengers and luggage. Operators of branch lines will probably prefer the suggestions of the designers who specify that the Dove may be employed more profitably in flights of from 200 to 300 miles, carrying from eight to 11 passengers, with fuel tanks only half filled, at the most economical cruising speed of 160 mph.

In the eight-passenger version of the Dove, provisions have been made to detach the washroom and rear luggage compartment bulkheads so that nine to eleven

seats may be installed when necessity demands. Even with this arrangement, there remains an adequate rear accommodation for baggage and equivalent space in the nose.

From the accountant's point of view, a major consideration when offering a shortline plane to operators of tributary systems, the Dove has been designed to operate at a minimum of cost, whether the plane is to be operated within the low utilization range up to 800 hours per year or in the high schedule brackets.

According to DeHavilland, the Dove represents more transportation for a given expenditure of power than any previous comparable aircraft, surpassed only by the 22-passenger Albatross liner of 1938 which was proclaimed the world's most efficient transport.

Great Britain, just as the United States, has long been faced with the need of a practical short haul airplane, practical for feederline use. DeHavilland claims the Dove is the first approach to this need and the new liner has been designed specifically for inter-connecting service. In designing the Dove, DeHavilland engineers had but these objects in mind, the desire to furnish operators with an airplane they could afford to purchase and maintain while operating at a profit; offer safety, speed and convenience to passengers and to improve the linkage system between main operating routes, both in England and abroad.

C-47 ★ C-54 Cargo **CONVERSION** Passenger

*Complete facilities
for SERVICE all types of Aircraft*

- Our mechanics can select your airplane at any of the War Assets Corp. surplus centers.
- Our Pilots under the direction of Capt. Clyde Pangborn can fly it to Aero's shops.
- Our shops will convert or service your airplane for CAA certification.
- Aero can lease you an airplane while your ship is in the shop.
- Or, just fly your airplane into New Haven and Aero will do the job.
- Aero specializes in 100 hour inspections; 24 hour engine change; engine overhaul; radio service; parts and accessories.

WRITE OR TELEPHONE

AERO INDUSTRIES CORP.

Main Office
699 Madison Ave.,
New York, 21, N. Y.
Tel. REgent 4-5236

Shops and Warehouses
New Haven Municipal Airport
New Haven, Conn.
Tel. 4-2613

Allison Installs Bearing Factory At Indianapolis

Allison Division of General Motors has set up a new unit devoted exclusively to the development and production of bearings, it has been announced by E. B. Newill, general manager. The bearing



Cruzan

Davis

Martich

plant will contain all departments of the new division and will be located in the original Allison buildings in Indianapolis.

B. L. Cruzan, who joined the Allison organization in 1918 has been named manager of the new unit. E. G. Davis will be in charge of bearing production and development and P. G. Martich will handle sales, service and customer contacts.

CAPITAL air-LINES



AIR-BORNE BULL. "Alabam", prize Aberdeen Angus, recently made front-page news when he arrived in Washington aboard a giant 4-mile-a-minute Capitaliner after a record flight from Birmingham. He was presented to the President by the Birmingham Chamber of Commerce.



KEEPING PACE WITH THE PUBLIC ACCEPTANCE OF AIR TRAVEL, Capital Airlines-PCA recently carried its 3rd millionth passenger and is now well on its way to the 4-million mark. It took 14 years to carry the first million . . . 4 years for the second . . . less than 14 months for the third.



STANDING IN LINE FOR NYLONS? Not these port Capital hostesses. New nylons are furnished by the company at low cost. One of those little things that add up to a glamorous trip by Capitaliner.



FLYING WHITE HOUSE. F.D.R., Jr., and C. Bedell Monro, president of Capital Airlines-PCA, participate in ceremonies commemorating the late President Roosevelt's historic flight to Casablanca in this famed DC-4. This plane is now one of the many giant 4-engined Capitaliners in the vastly expanded Capital Fleet.

Dutch Offer All Wood Low Wing As First Postwar Civilian Plane

Holland's first contribution to the civilian airplane industry is the Difoga 421, designed and built during the Nazi occupation and temporarily powered by a Ford V-8 engine. The first Dutch built airplane to take to the air since the liberation of the Netherlands is a twin-boom pusher made up of scrap materials and plywood obtained with hard to get wartime wood priority coupons.

The National Aeronautical Laboratories and the Civil Aeronautics Authority contributed in the testing and inspecting of the Difoga 421, without the Nazis becoming any the wiser. Wind tunnel testing and breakdown of component parts was conducted as an aid to the efforts of engineers H. Koekebakker and J. Weyer.

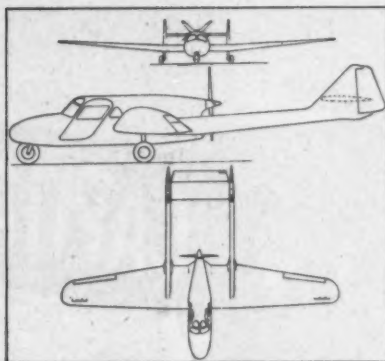
Designing of the civilian craft was done in the attic of a house in Rotterdam and parts were manufactured in a small shed while the builders managed to escape the Nazi slave labor battalions. Faced with a lack of materials, the Dutch engineers salvaged shot down military aircraft, taking away such parts as they could use.

The two-place Difoga 421, when placed in production will be of all-wood construction, with side-by-side seating and featuring exceptional visibility in all directions as well as complete lack of engine noise. Ample baggage space has been provided behind and beneath the seats without sacrificing leg and cabin room. Dual stick controls have been installed and all engine controls are mounted on a panel so as to be easily operated from either seat. Power for the production models will be supplied by an engine of approximately 100 hp.

A one piece splitflap extends beneath the wing between the ailerons with an operating range from 15 degrees for take-off and 60 degrees for landing. The actuating handle, with indicator, is mounted in the roof of the cabin. Fixed slots are provided at the wingtips and the empennage includes double rudders as well as one piece stabilizer and single elevator. The monocoque tail booms are attached directly to the rear spar of the low wing.

The fuselage of the Difoga 421 is fairly short with the powerplant mounted at the rear. A four-blade propeller is driven by an extension shaft carried by a cantilever structure of welded steel tubing. The undercarriage is fitted with mechanical brakes and the nose wheel is mounted on a swivel to facilitate steering. Oleo shock struts are used throughout.

Those who have flown the Difoga 421 have praised its ease of handling both on the ground and in the air. They have also praised the spin-proof qualities as



Three view Difoga 421

well as the lack of noise and vibration. Headquarters for the Difoga organization, now financed by Frits Diepen Aircraft, Inc., will be concentrated at the Hague where the backers also expect to conduct a charter service and fly-it-yourself system.

Martins Ordered For Use Both Here and Abroad

Northwest Airlines has ordered 10 Martin 202's for use on the domestic routes. Croil Hunter, NWA president expects to have the new transports in service soon after the first of the year. Delta has also ordered 20 of the high-speed transports. Martin 202's are also to be used abroad with the first export orders coming from the Dodero Airline interests of Argentina. Dodero, ordering four Martin planes, was the first foreign operator to offer service using American twin engine aircraft of postwar design, it is reported.

The Martin 202 is also being adopted for use by non-scheduled air freight operators. Commander Air Lines, largest organization in this phase of the industry, has placed an order for six Martin transports for use in international operations.

Other current Martin backlog orders include seven 303 type transports, to be delivered in 1947 to Panagra. The 303's, powered by 2400 h.p. Pratt & Whitney engines, represent an investment of \$1,589,000 and will be used in South and Central America service.

Foreign Manufacturers Not To Participate In Air Shows

Aircraft Industries Association has agreed that no foreign manufacturers will be invited to participate in the two annual air shows to be sponsored this fall and next spring. Domestic manufacturers, not members of the organization, will be permitted to participate in the shows but will not receive the usual member benefits.

Manufacturing Personnel

Al Bennett, formerly factory sales manager for Aeronca at Middletown, Ohio, takes over the Aeronca distributorship for the New York area effective July 6. His last operations base in the east was at Hightstown, N. J.



Ford

Smith

Adams

Ford C. McElligott has been named advertising manager for Airquipment Co., according to C. F. Turner, v. p. The manufacturers of ground handling equipment and special tools for aircraft have moved to new quarters at 2820 Ontario Street, Burbank, Calif.

R. D. Macdonald of Montreal has been appointed staff assistant to Larry Cooper, Stinson general sales manager. Macdonald was formerly a representative of the Canadian government in Washington.



Safford

Macdonald

McElligott

Robert Safford has been elected v. p. of the Wayne Pump Co., of Ft. Wayne. He was formerly assistant to the President and manager of the Wayne Houston-San Antonio division.

Richard H. Previtt has resigned as v. p. of Kellett Aircraft Corp. to engage in a consulting capacity in aviation and helicopter development.



Schulte

Previtt

Green

James L. Green, formerly of Convair's Washington office, has been appointed Stinson regional sales manager for the eastern area, with headquarters in New York City.

William S. Schulte, formerly chief metallurgist of the Curtiss-Wright propeller division has been promoted to the office of quality manager.

Captain B. B. Smith has been named Bureau of Aeronautics representative at the Curtiss-Wright Columbus plant. He relieves Commander Ray W. Fisher, USNR, who becomes assistant executive in the Columbus bureau office.

Burnham Adams has been named west coast sales manager for the electro-mechanical division of Lear, Inc. He was formerly west coast manager for Wright Aeronautical Corporation.

George C. Ford has been appointed division manager for Consolidated Vultee, Downey, Calif. He was formerly works manager. The Downey plant is engaged in building P-81 jet fighters and making tools and assemblies for other Convair aircraft.



Three quarter view of the Difoga 421



New Protek-Plug Assures Greater Engine Protection

The new CECO Protek-Plug assures a new high standard of protection against the presence of moisture within aircraft engine cylinders. And it delivers this greater protection at a really low cost.

It has five new, improved features which increase its over-all effectiveness and length of life . . .

The silica gel is enclosed in a glass chamber, completely to eliminate moisture penetration from outside . . . giving a clearer picture of moisture conditions inside the cylinder.

The glass is seated in a metal base to strengthen the plug, and to give a tighter fit in the cylinder.

Standard size spark-plug wrenches fit the metal hex base to speed installation.

The brass cap fits tightly over the open end, keeping the Protek-Plug tightly sealed until it is placed in service.

The moraine filter replaces the paper strainer formerly used in the days of wartime shortages.

Write for full information on the new improved Protek-Plug to the address below.

CARBURETORS

FUEL PUMPS

PROTEK-PLUGS

CHANDLER-EVANS CORPORATION

WEST HARTFORD 1, CONNECTICUT, U. S. A.



FINANCIAL REVIEW:

PAA Shows Favorable 1945 Earnings Despite U. S., Foreign Taxes

Pan American Airways reported net earnings of \$7,565,580 for 1945, after provision for federal and foreign taxes. Gross revenues in 1945 were \$69,000,000 compared with total operating expenses of \$62,540,600. These revenue figures compared with \$3,361,252 net revenue and \$39,000,000 gross revenue in 1941, the last pre-war year.

Pan American reported these operating revenues for 1945: Passengers, \$39,898,969; mail, \$17,737,574, of which \$10,670,552 was U. S. and \$7,067,021 foreign; express and freight, \$8,129,762, and other transportation, \$2,204,616. Total revenue from government contract fees was \$583,809.

Operating expenses included: Flying operations, \$15,549,745; ground operations, \$9,461,936; maintenance and repairs, \$12,077,240; communications and meteorology, \$2,909,736; passenger service, \$3,729,006; traffic and sales, \$6,557,393; advertising and publicity, \$2,352,633; general and administrative, \$5,762,803, and depreciation, \$4,076,071.

Provision for taxes included: U. S. income tax, \$1,917,264; U. S. excess profits tax, \$60,945; foreign income taxes, \$512,640; and foreign excess profits taxes, \$11,374. The company had an earned surplus of \$14,795,075 as of Dec. 31, 1945.

Consolidated Vultee Aircraft Corp. reported revised net income of \$6,748,932 for the fiscal year ended Nov. 30, 1945, equal to \$4.72 a share after provisions for preferred dividend

requirements. Sales for the fiscal period totaled \$644,053,838.

As of Nov. 30, 1945, the corporation's backlog of unfilled orders was \$229,610,000. Additional orders received to April 30, 1946, increased this figure to \$264,910,000, exclusive of non-aviation products. Of this amount, \$173,345,000 represents contracts for military production, \$62,770,000 for Army and Navy experimental and research projects and \$28,795,000 for commercial and personal aircraft.

Continental Motors is planning a \$12,000,000 financing program to provide for modernization and expansion of its Muskegon, Mich., plant and for possible acquisition of additional manufacturing facilities and working capital needs. The company reported a backlog of \$110,000,000 in orders for engines and machine products for the next two years.

Globe Aircraft Corp., Ft. Worth, Tex., reported income of \$398,853 for the year ended Dec. 31, 1945, before provision of \$345,978 for taxes and contract renegotiation costs, leaving a total net income of \$52,877. Sales for the year totaled \$4,799,227 and total gross income was listed at \$424,326.

Taylorcraft Aviation Corp. is offering 20,000 shares of \$1 par value common stock through the firm of Troster, Currie & Dummery. The stock was priced at \$13 a share.

American Airlines offered an issue of \$40,000,000 of 3% sinking fund debentures and 400,000 shares of stock through a group of underwriters headed by Kidder, Peabody & Co., Lehman Bros., Glorie, Forgan & Co., and Emanuel Deetjen & Co.

Bendix Aviation Corp. reported earnings of \$13,329,902, or \$6.30 a common share for the fiscal year ended Sept. 30, 1945. This was before a special credit of \$2,168,349 to net income from reduction in the reserve for doubtful receivables. Net income after the special credit was \$15,498,252, equal to \$7.31 a share. Earnings for the preceding fiscal year were \$15,290,004, or \$7.22 a share. Net

Arthur W. McCain Elected President of Chase Bank

Arthur W. McCain, widely known as a commercial banker identified with the



McCain

Prior to his election as president, he served as vice president of Chase business and banking in the 11 states of the far West.

financing of aircraft manufacturing and air transport companies, has been elected president of the Chase National Bank, New York. He has been associated with the Chase bank since 1929, and entered the banking business in 1914 as a clerk in the Bank of Jonesboro, Ark.

sales, royalties and other operating income, after deducting refunds due to retroactive price adjustments, amounted to \$649,389,823 for fiscal 1945, compared with \$609,662,826 for the previous year.

Pennsylvania-Central Airlines reported a net loss of \$629,320 for the first quarter of 1946. Operating revenues for the period were \$3,109,745, a 56% increase over the comparable period in 1945. Operating expenses amounted to \$4,149,012. Employment expansion and conversion to four-engine equipment were factors bringing about the loss.

Beech Aircraft Corp. has negotiated an agreement with a group of 15 banks for a \$4,000,000 loan for the financing of production of current Beechcraft planes and new models which the company expects to announce in the near future. The Fourth National Bank of Wichita heads the bank syndicate making the loan. During the war a similar syndicate, headed by the Fourth National of Wichita granted Beech credit of \$50,000,000 under the V loan regulations and previously had established for \$2,000,000 for the company. Both loans have been paid in full.

Lockheed Aircraft Corp., reported net income, before certain charges and credits, of \$4,800,738 for the year ended Dec. 31, 1945, with a total of \$5,469,888 being transferred to earned surplus. Sales for 1945, including fees on government contracts, totaled \$417,615,160, less provision of \$2,538,779 for possible disallowances on government contracts.

Costs and expenses for the year ended Dec. 31, 1945, totaled \$400,278,485, of which \$405,454,580 went for wages, salaries and materials, \$2,376,030 for interest and \$1,447,875 for contribution to employees' retirement plan. Taxes totaled \$2,292,975. Earned surplus was \$27,292,186 as of last Dec. 31.

Chicago & Southern Air Lines registered with the Securities and Exchange Commission voting trust certificates for 170,000 shares of no par value common stock and named Kebbon, McCormick & Co., and I. M. Simon & Co., as the principal underwriters. C&S also listed 42,000 shares of common stock issuable to holders of outstanding warrants on or before Oct. 27, 1955, at \$30 a share.

The Aviation Corp., reported final net income for the fiscal year ended Nov. 30, 1945, after all charges including federal taxes, of \$5,746,846, equal to 90c per common share—exclusive of the corporation's equity in undistributed earnings of associated companies amounting to 20c per share. This compared with revised net income for 1944 of \$3,147,005, equal to 54c per common share. Net sales for 1945 amounted to \$32,101,772, compared with revised net sales of \$59,816,649 in 1944. Total sales for the corporation and its associated companies amounted to \$920,000,000 for 1945, compared with \$1,340,000,000 for the same group of companies in 1944.

BUYERS OF SURPLUS

Stinson AT-19 Aircraft

Facilities immediately available for complete conversion and modification of aircraft for licensed private and commercial operation.

★

ALL AMERICAN AVIATION, INC.

210 GREENHILL AVE. • WILMINGTON 99, DELAWARE

"Operators of the Air Pick-Up System"

POSTAGE
WILL BE
PAID BY
ADDRESSEE

NO
POSTAGE
STAMP
NECESSARY
IF MAILED
IN THE
UNITED
STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 2455-R. SEC. 510 P. L. & R., HARRISBURG, PA.

AMERICAN AVIATION

American Building,

Washington 4, D. C.



**MAIL ME THE NEXT
YEAR OF AMERICAN
AVIATION (24 ISSUES)
AND SEND BILL
for \$4.00**

1 year \$4.00, for U. S., Mexico,
Central and South American Countries,
Canada: 1 year \$4.50. All other
countries 1 year \$5.50.

Send magazines to

Name _____

Address _____

City and State _____

Zone

Occupation _____

Company _____

Send bill to

Name _____

Address _____

City and State _____

Zone

Since before The war

The two standard and essential
news services of U. S. Aviation



AMERICAN AVIATION DAILY

Always first with the news

AMERICAN AVIATION

The authentic complete news-review magazine

AMERICAN AVIATION PUBLICATIONS

Wayne W. Parrish, Editor and Publisher

AMERICAN BUILDING

WASHINGTON 4, D. C.

Financial Comment

by
I. W. Burnham, II
of

Burnham & Company
Members of New York Stock Exchange

All during the war it was recognized by the air transport industry that upon the cessation of hostilities it would become necessary for the airlines to seek additional capital in order to finance the post-war expansion in their activities. From time to time since V-J Day, many of the airlines have announced financing plans either through recourse to the capital markets or by sale of senior obligations directly to institutional investors.

The largest individual flotation of securities was made during the past week by American Airlines, Inc. with the sale to the public of \$80 million of senior obligations divided equally between 3% debenture bonds and 3½% convertible preferred stock. The preferred stock, if fully converted at some future date, will add 1,900,000 shares of common stock to the 6,500,000 shares now outstanding.

While the books on the recent underwriting have been closed, it is common knowledge that the market for American Airline securities has been pretty well glutted, particularly after the recent sale of 211,000 shares of the pre-split holdings of the Aviation Corporation. These shares subsequent to the public sale, were split into the equivalent of slightly more than one million shares of presently outstanding stock. The Aviation Corporation holdings were sold at \$90 per share equivalent to \$18 on the new common. On the day of the new financing the common stock sold down to a low price for this year at \$15.50. It is not surprising, therefore, in view of the inability of airline securities to make progress in recent strong securities markets, that the public offering of airline securities requires real salesmanship at a time when most new security issues "go out the window" and sell at sizable premiums.

It is unfortunate for the airlines that the financing which they are required to do must be done at a time when the relative attractiveness of securities of this industry lack the glamour of pre-war days and suffer from the extraordinarily poor operating results of the reconversion period. It is also unfortunate that the industry is financing in a market which seems to have been temporarily oversold on airline securities. As the earnings picture changes during subsequent months, resulting from peak seasonal traffic and the use of the more profitable 4-engine transports, it is reasonable to expect that the attitude of the capital and securities markets will be revised to more favorably accept the new issues of airline securities.

Expect No Early Airline Profits, Says Hal Nourse

Hal E. Nourse of United Airlines, speaking before the Air Transport session at the SAE summer meeting at French Lick, Ind., painted a pessimistic view of immediate airline earnings. More profits can be expected, Mr. Nourse predicted, with the advent of more economical and efficient airplanes, lower tax rates and greater public acceptance of air travel.

Leading Aviation Securities (Courtesy of Burnham & Co.)

New York Stock Exchange

	1946		Range for 8 Days Ended 6/7/46		Range for 6 Days Ended 6/14/46		Two Weeks Net Change
	High	Low	High	Low	High	Low	
AIRLINES							
American Airlines	197½	184½	171¼	161¼	171¼	181½	— ½
Brantiff Airways	34½	24	27½	26	28	28½	— ½
Eastern Air Lines	311½	297½	273¼	257½	277½	28	— 1½
National Airlines	347½	234	27½	261½	303½	273½	+ 2½
Northwest Airlines	86½	48	48½	46½	48	48	— 2
Pan American Airways	27	18½	19½	18½	19½	18½	— ½
Penn.-Central Air	45½	36½	40½	38½	43	40½	+ 2½
Trans. & Western Air	71	48½	50	49	54½	49½	+ 4
United Air Lines	84½	37½	41½	39½	41½	39	— ½
Western Air Lines	25	24½	25	24½	26½	24½	+ ½
MANUFACTURERS, ETC.							
Aviation Corp.	14½	9½	11½	10½	11½	10½	— ½
Aviation Corp. pf.	83½	80½	86½	84	84½	83	— 1½
Beech Aircraft	307½	147½	25¼	24	24½	23½	— 1
Bell Aircraft	35½	24	20½	27½	28½	26½	— ½
Bendix Aviation	88	45½	53	50½	51½	49½	— 3
Boeing	38	26½	28½	28½	29½	28	— 1½
Cons. Vultee	33½	23½	28½	24½	28½	24½	— 1½
Continental Motors	24	17	20½	19	19½	18½	— 1½
Curtiss-Wright	12½	7	8½	8	8½	7½	— ½
Curtiss-Wright "A"	34½	20½	23½	22	22½	21½	— 1½
Douglas Aircraft	108½	86	87½	87	87½	87½	— 3½
Grumman Airc. Eng.	52½	42	50½	48½	50½	48½	+ 2
Lockheed Aircraft	45½	31½	35½	33½	36½	35	— 1
Martin, Glenn L.	45½	37½	41½	39½	41½	40½	— ½
National Aviation	23½	20½	23½	22½	24	22½	— 1
North Am. Aviation	16½	12½	13½	14½	15	14½	+ ½
Republic Aviation	247½	15½	22½	20	23½	21½	+ 2½
Sperry Corp.	40½	31½	32½	31½	32½	31½	— ½
United Aircraft	37½	37½	30½	28½	29½	28½	+ 1½
Wright Aero.	108	83	85	85	85	85	— 2

New York Curb Exchange

AIRLINES							
Alaska Airlines	12	9½	11	9½	10½	9½	— ½
Colonial Airlines	43	26	32	30	31½	29½	— 2
Northwest Airlines	217½	183½	183½	173½	19½	17½	+ 1½
Pan American Air. war.	14	7½	8½	7½	8½	7½	+ ½
MANUFACTURERS, ETC.							
Aero Supply "A"	23½	20½	21	21	20½	20½	— ½
Aero Supply "B"	7½	5½	6½	6½	6½	6½	— ½
Air Associates	18	20½	18½	18½	19½	18½	— 1
Air Investors	8½	5½	5½	5½	5½	5½	— ½
Air Investors cv. pf.	—	—	—	—	—	—	—
Aireon Mfg.	17½	11½	12½	11½	12½	12	— ½
Aireon Mfg. pf.	22½	14½	17	15½	16½	16	— 1½
Aro Equip.	27½	21	23½	22½	22½	22	— ½
Bollinger Aircraft	9½	6	7½	6½	7½	6½	— ½
Brewster Aero.	31½	21½	28½	26	26½	26½	— ½
Cessna Aircraft	10½	6½	8	7½	7½	7½	— ½
Fairchild C. & L.	17½	13½	14½	14½	14½	14½	— ½
Fairchild E. & A.	8½	5½	6½	6½	6	7	+ 1½
Fairchild E. & A. pf.	11½	7½	9	8½	11½	9½	+ 1½
Irving Air Chute	13½	10½	10½	10½	11	10½	+ ½
Menasco Mfg.	8½	5½	7	6½	6½	6½	— ½
Northrop Aircraft	15½	10½	14½	14½	15½	14½	+ ½
Piper Aircraft	15½	7½	11	10½	10½	10	— ½
Roosevelt Field	9½	5½	7½	7½	7½	7½	— ½
Ryan Aero	10½	7½	8½	8½	9½	8½	+ ½
Solar Aircraft	29½	17½	20	27½	28	26½	+ 1½
United Aircraft Prod.	29½	23½	24	23	23½	23½	— ½
Waco Aircraft	9½	6½	7	7	7	6½	— ½

*Called for redemption June 24, 1946.

Over-the-counter Securities

	June 7, 1946		June 14, 1946	
	Bid	Asked	Bid	Asked
AIRLINES				
Air Cargo Transport	8¼	6½	8	8¼
All American Aviation	9½	10¼	9½	10¼
American Overseas Airlines	—	—	56	59
Chicago & Southern Air Lines	28	28¾	22	23
Continental Air Lines	20½	21½	20½	21½
Delta Air Lines	46½	46½	46	47½
Expresso Aeron	9½	9½	9½	9½
Inland Airlines	9½	10½	9½	10½
Mid-Continent Air Lines	19	19½	18½	19½
TACA Airways	12¼	12¾	13¼	13¾
MANUFACTURERS, ETC.				
Aeronautical Products	—	—	7½	7½
Aerona	14½	14½	14½	15½
Aircraft & Diesel	2	2½	—	—
Airplane & Marine	1½	2	1½	2
Central Airports	4½	2½	2½	2½
Columbia Aircraft	2½	2½	2½	2½
Continental Aviation & Eng.	2½	2½	2½	2½
General Aviation Equip.	2½	2½	2½	2½
Gladson Products	3½	3½	3½	3½
Globe Aircraft	8½	8½	8½	8½
Harlow Aircraft	4	4	4	4
Harvill Corp.	4	4	4	4
Interstate Aircraft & Engine	4	4	4	4
Kellett Aircraft	4	4	4	4
Liberty Aircraft	4	4	4	4
Luscombe Airplane	4	4	4	4
McDonnell Aircraft Corp.	4	4	4	4
McDonnell Aircraft Corp. pf.	4	4	4	4
Pacific Airmobile	4	4	4	4
Taylorcraft	4	4	4	4
Timm Aircraft	4	4	4	4

Operations and Maintenance Review

Including

COMMUNICATIONS—NEW EQUIPMENT—AIRPORTS

Greater Utility For Small Planes Stressed At Detroit

Discuss Plan To Make Plane Ownership More Attractive

PROBLEMS connected with broadening the aircraft market, by giving plane owners more utility for their investment, underwent thorough discussion at the mid-June meeting on light aircraft problems sponsored by the Institute of the Aeronautical Sciences at the Rackham Educational Memorial in Detroit.

Topics given most serious consideration, by selected industry speakers and during floor discussions, included cost reduction through airframe design simplification and through parts standardization, better safety characteristics built into planes, simplified controls to reduce training time and flight fatigue, engine and propeller noise reduction to make flying more pleasant and to reduce civic objection to airport development, improvement in local facilities toward cheaper and more attractive service, and the general problem of enabling more people to buy airplanes and use them.

Loening is Keynoter

Grover Loening, aviation pioneer and still an active pilot, keynoted the session at a dinner address in which he predicted a far greater small plane market than the industry generally anticipates—provided the potential market is offered more useful planes and widespread improvement in facilities for using them. Loening, currently a special consultant to the National Advisory Committee for Aeronautics, challenged younger engineers not to let the industry develop fixed concepts of what constitutes a good plane.

Urging further research into developments not yet incorporated into the personal flying picture, Loening suggested that in addition to more airports there should be an attempt to adapt the Navy's aircraft launching and arresting devices to "back yard" flying. He also advocated experiments with the Army system of landing on a wire where no field exists, and with jet assistance, particularly for water take-offs where jet thrust under water through the step in the hull or pontoon will give even greater acceleration than present methods of using jet force into the air. In connection with Jato, Loening suggested that controlled jet force from the leading edge back over the entire wing area might be used to obtain above-stalling wing lift at very low forward speeds.

Several papers presented to the more than 200 industry representatives stressed the importance of reducing costs through design simplification and parts standardization. Carl Doman, vice president and chief engineer of Aircooled Motors, Inc., gave a number of illustrations to show

how his company, partly as a result of work on the power plant for the Republic Seabee is approaching \$3 per horsepower engine costs and can foresee the possibility of cutting as low as \$2 per horsepower. Doman challenged the attitude that tooling and production must be expensive whenever it applies to airplanes. He gave numerous examples to show how parts could be eliminated or consolidated, how stampings could be substituted for castings, and particularly how mass-produced automotive accessories could be used on aircraft engines.

Another paper on simplification was presented by William B. Westcott, landing gear project engineer for Electrol, Inc. Westcott gave theoretical and actual illustrations to show that the number of components, as well as their weight and processing costs, could be reduced in landing gear manufacture.

Responsibilities Outlined

Responsibilities of the local service operator in making airplanes more useful and in satisfying the flying public were discussed by Elmer Haslett, president of North American Airport Corp., and George H. Weitz of the non-scheduled aircraft maintenance section of CAA. Haslett, former manager of La Guardia Field whose company operates the Westchester County Airport at White Plains, N. Y., pointed out that although very few airports either make their operating expenses or satisfy their customers, his company has assumed the responsibility of keeping Westchester and other fields on a paying basis while building up a following of customers who won't soon give up flying as a waste of money.

Haslett's approach to the problem has been to offer a quality of service intended not so much to make money as to draw a profitable class of customers who will be steady buyers of planes, parts and repair services. His service at present includes uniformed attendants to meet and assist all incoming planes, frequent station wagon service to and from New York rail connections at White Plains, a

downtown office to assist pilots before they get out to the field, and all-expense training "tours" which are advertised in New York classified sections to attract new flight students and potential buyers to the field. All arrangements for these tours are made in advance through the downtown office, permitting the trainee to start flying as soon as he arrives at the field and assuring him of quick transportation to and from Westchester. Total charge for this type of training and transportation in Aeroncas, has been set at \$12 per hour.

Multiple Responsibility

CAA spokesman Weitz presented a picture of multiple responsibility for improving maintenance service and costs. He urged owners to learn more about their planes and pay more attention to preventative maintenance, and said that service establishments should put themselves on a business-like basis intended to offer more efficient and more attractive service at costs which would bring fewer complaints than are now received. He said that manufacturers have the dual responsibility of designing planes which are easier to maintain and of setting up field liaison and factory training to assist local service establishments. The CAA, he added, is attempting to strengthen maintenance standards while reducing the amount of paper work required of owners and repair stations.

Piper Aircraft's chief engineer, Walter Jamouneau, said that his company, after considerable work toward higher cruising speeds, is studying spoilers, flaps and unconventional wings designs in an effort to offer lower rather than higher speeds. Pointing out that personal plane utility is low largely because the average pilot in the average plane cannot venture forth in bad weather or at night (conditions prevailing during much of the time which could be used for personal flying), Jamouneau indicated that there should be much demand for a plane which had a good cruising speed but which could be slowed down, when necessary, to permit a pilot to land in a tight place or to change his course without danger when an obstacle loomed ahead.

To the problem of cutting initial and operating costs, the Detroit session gave considerable discussion without arriving at conclusions which could be of immediate benefit to the small plane owner.



Canadian Chipmunk—A new all-metal light trainer, the first completely Canadian designed aircraft to be produced by de Havilland Aircraft of Canada Ltd. The company states that the Chipmunk is specifically designed to replace the familiar Tiger Moth in which possibly a majority of pilots in the British Empire received their first flight training. The Chipmunk is powered by a 140 hp Gipsy Major engine which gives a cruising speed of about 133 mph. Later models will be equipped with a Gipsy of 160 hp. A side-by-side version is also being developed. The manufacturer states that arrangements are already under way for sales and servicing in Empire and foreign markets.

Instrument Landing System Now Available To Airlines

Install Facilities At More Than 100 Major Airports

WIDESPREAD use of the Civil Aeronautics Administration's instrument landing system in scheduled air transportation is expected before the end of the year, according to a joint statement issued by CAA and the Air Transport Association. The system is now installed or nearing completion at 50 major air terminals, and is expected to be ready before winter at a total of 105 points. Deliveries of equipment for the ILS localizer, glide path and markers transmitters is reported to be keeping pace with the installation program.

The airlines, according to ATA, expect to have all aircraft equipped with receiver and instrument equipment for ILS by the end of 1946, and special pilot training is now in progress. Airline attitude toward progress now being made has been summed up by ATA president Emory S. Land with the statement, "... airlines are anxious to utilize any devices which will assist in speeding up landings under adverse conditions. Weather interruptions to service have been costing U. S. airlines more than \$25,000,000 a year.

"The CAA instrument landing system," Land continued, "was the only such method proven and available at the beginning of the war and the armed forces naturally took first priority on it. Now that this equipment is available for civil

use, the airlines and CAA are cooperating to see that it benefits the flying public as soon as possible.

"The airlines, through joint research with CAA, Army and Navy, are studying other low visibility landing devices invented during the war, and also are watching closely tests made at the CAA experimental station at Indianapolis."

T. P. Wright, Administrator of Civil Aeronautics, reports that a number of refinements in the CAA instrument landing system are now in progress and may soon be incorporated into the system. Important among these is a method for connecting the automatic pilot to the ILS receiver, permitting mechanical plane response to signals received.

(For a description of the CAA landing system and comparable military SCS-51 equipment, see *AMERICAN AVIATION* for March 1, page 42.)

Places where ILS is or will be installed are: Already in commission: Atlanta, Chicago, Cleveland, Kansas City, Los Angeles, La Guardia, Oakland, Washington, Seattle, St. Louis, New Orleans, Omaha, Wichita, Brownsville, Las Vegas and Grand Junction. Construction completed but lacking radio equipment: Idlewild, Denver, Dallas, Ft. Worth, Indianapolis, Dayton, Louisville, Reading.

Construction in progress: Philadelphia, Cincinnati, Buffalo, Tulsa, Minneapolis, El Paso, Houston, Billings, Charleston, S. C., Oklahoma City, Knoxville, Memphis, Amarillo, San Antonio, Albuquerque, Salt Lake, Eugene, Raleigh. Proposals now being issued: Long Beach, Jackson, Miss., Detroit City, Willow Run, Columbus, South Bend, Newark and Jacksonville, Fla.

Operations Notes

In line with other preparations for a tremendous advance in small-scale flying, CAA plans to increase its present list of 247 Approved Repair Stations to at least 1,000 by 1950.

Civic objections to airplane noise, which constitute considerably more than a nuisance threat to airport development and general advancement of aviation, are being faced in a serious manner by the National Advisory Committee for Aeronautics. NACA's Dr. Theodore Theodore has directed extensive research into the problem of propeller noise and now has considerable evidence that a relatively noiseless propeller is practical, at least for light aircraft engines. His studies show that a fan type propeller, with many blades and low tip speed, can be more efficient and much less noisy than conventional propellers. We hope the industry wastes no time in putting the idea to test.

Out in Idaho, where they have plenty of room for such things, a small town civic group is seriously considering a plan to eliminate the inconvenience of the long (one mile) trip from airport to business district by constructing a taxiway, for airplanes only, from the field to an in-town parking area.

From time to time for at least five years we have been intrigued by reports that bird-proof windshields were being tested by firing chickens, ducks and even geese at airplane speeds from compressed air guns. In the same period we have been on several flights during which we reacted violently at the sight of large birds hurtling toward us and missing by inches, thereby impressing us with the worth of such tests. Now we hear that all this poultry has not been splattered in vain. The CAA has just given its full approval to a new safety glass, consisting of two layers of semi-tempered glass separated by a layer of vinyl plastic, which was developed by the Pittsburgh Plate Glass Co. and tested against the windshield assembly of a Beechcraft 18C. Reports state that it successfully resisted shattering or penetration by four pound chickens fired at speeds up to 225 mph.

In discussing ways of increasing revenue, airport operators at the recent Chicago conference didn't bring up the idea of installing parking meters. It could be a touchy subject, particularly to the cash customers, but it shouldn't be overlooked as a means of squeezing some sort of profit out of the thousands of sunny-day visitors who spend nothing on airplanes but the price of gasoline to drive out and watch them.—**DAVID SHAW**.

Largest Airline School

The former AAF base at Ardmore, Oklahoma now houses the largest commercial airline training school in the country, operated by American Airlines. At capacity, the school can accommodate 200 students covering flight captains, first officers and ground service personnel. Initial classes are now in training and the school expects to graduate 2200 persons by the end of the year.



Roomy Bridge on Packet—Pilot, co-pilot, navigator and radio operator are able to work in the same unobstructed area, within note-passing reach of each other, in the spacious flight deck of Fairchild's military cargo plane, the C-82 Packet. A ladder and companionway connects the bridge and the plane's 2,916 cu. ft. cargo hold.

Install Wright Engines To Increase Speed and Payload of C&S DC-4s

Chicago & Southern Air Lines, first carrier to standardize on Wright engines (9HD's) in its DC-4 conversions, has worked out a powerplant installation unit in cooperation with Wright Aeronautical and Rohr Aircraft Corp. which, C&S claims, will considerably simplify engine maintenance and servicing in addition to adding 25 mph to the plane's cruising speed, increasing payload by as much as 1200 lbs., and reducing direct operating costs by approximately eight percent.

The installation unit, which requires no modification of airplane structures, consists of the Wright 9HD engine pre-equipped with a new nacelle that attaches to the standard C-54 wing and firewall. A new cantilevered cowling has been worked out, with three interchangeable sections and an attachment feature which eliminates bow rings and the necessity of removing them at whatever point the engine is to be serviced. Accessory cowl stringers are integral with the cowl panel to reduce the difficulty of working around supports.

Additional features for easier maintenance are an oil cooler 'package' which incorporates airscoop, radiator and control flap into a single unit which can be removed as a whole, and a carburetor airscoop which similarly is an integral assembly.

All power units to be used by C&S are interchangeable across the plane, permitting quick removal and exchange without keeping the plane out of service for prolonged periods.

Calvert Stage Troupe Travels In Own Plane

John Calvert, who spends about 20 weeks out of the year on the road with a stage show, has found a new and economical use for transport aircraft. He has converted a C-47 in which he is flying his troupe from place to place.

A pilot for 16 years, Calvert last year travelled in a Stinson Reliant while his troupe and props moved by chartered bus. He claims that the DC-3, with full allowance for depreciation, insurance, and operating and maintenance expense, is costing him about two cents a mile less than he would pay to charter an adequate bus.

Revenue of greater importance than mileage costs, he says, comes from being able to make more appearances during a season. His itinerary thus far this season has taken him from San Francisco to Salt Lake to Detroit, back to San Diego and then to Washington, D. C.—each involving a trip which would have cost several days by surface transportation. As an additional source of income, both in cash and publicity, Calvert's co-pilot is licensed and insured to use the plane for charter and sightseeing flights whenever it is not being used to carry the show.

The attractive and unusual conversion, designed by Calvert and carried out in various phases by several Southern California firms, has divided the main hull into two compartments. The smaller forward room is normally used to carry equipment for the show, but can be used



Study LaGuardia Approach Procedure—A group of KLM Royal Dutch Airline pilots, in this country for check-out on U. S. procedures preparatory to commencing transatlantic schedules, is shown being briefed in localizer work at Eastern Air Navigation Service, 5 W. 46th St., New York City. Left to right are Norman Potter, eastern district manager for Certified Aviation Centers; A. Martin Henry; Capt. H. C. M. Hakkenberg van Gaasbeek; Capt. E. Van Dyk; Capt. A. D. Snitslaar; instructor Richard Fohl; and, seated, J. W. M. Meyer and Capt. H. Dill. Eastern Air Navigation Service is one of the ground training establishments certified under Casey Jones' recently organized Certified Aviation Centers system.

Pest Control Test

The economic capabilities of the helicopter in pest control work are to be studied this month in a specially equipped Model 47 Bell rotor plane. Tests will be conducted on crops and orchards in the Yakima Valley of Washington state, under the direction of Herman A. Poulin, president of Central Aircraft Co., pest control operators.

for passengers by quick installation of temporary seats. The main cabin, also capable of accommodating additional seating, has twelve chrome and leather chairs which swivel to face in any direction.

Reduce Prices

War Assets Administration has announced a price reduction on Vultee BT-15 trainers from \$450 to \$200. Other reductions include the C-60 passenger types to sell at \$15,000 to \$20,000, depending on condition. A flat price of \$12,500 is set for cargo versions and the navigator types will continue to sell for \$5000.

Pilots Protest Physical Examination Cost Increase

Commercial pilots and those who undergo the commercial and airline physical examinations as required by CAA, are loudly protesting the recent increase of charge from \$6 to \$15, by medical examiners. In an effort to clarify the meaning of this action, the CAA plans to rewrite the Safety Regulations Release No. 205, which includes the authorization.

According to E. M. Sturhahn, executive assistant to the CAA administrator not all pilots will be required to pay a \$15 fee for their examinations. The price, ranging up to \$15 will depend entirely upon what the individual medical examiner wishes to charge. The price increase was originally authorized when examiners stated that initial commercial pilot physical examinations, included refraction of the eyes under cycloplegia, requiring an average of two hours time. Airline pilot exams take more time.

It is still not clear, in the minds of many pilots, whether the new charges will apply to all periodic examinations or merely to the original.

New Circular Hangar Rotates on Rollers, Encloses Planes in Six Pie-Shaped Stalls

A new type hangar, which is circular in form and rotates on rollers, has been developed by E. G. Kidwell, owner-operator of Central Airport in Compton, Calif., near Los Angeles.

The Roto-Hangar is divided into six sections, pie-shaped. The six segments are separated by steel mesh and each stall holds one plane. The roof and side-walls are stationary, but the floor and planes rotate inside the shell under the power of a three-quarter horsepower electric motor. Push button control delivers the selected airplane to the single

door opposite the taxiway.

The Roto-Hangar is 84 feet in diameter and each plane stall is 40 feet wide at the front and 11 feet wide at the rear. The structure is corrugated steel with a roof of steel stress construction. Shop fabricated and packaged in units, the Roto-Hangar is expected to cost approximately \$10,500.

Kidwell got the idea because of the space utility problem at his airport. The first units now are under construction at the Compton airport and are expected to be completed in the next few weeks.

New Equipment

Radio-Electronic Roundup

Airline VHF Receiver

A tunable VHF receiver, for omni-directional range systems such as the CAA is installing on the New York-Chicago range, is now available for airline experimental work from Aircraft Radio Corp., Boonton, N. J. The equipment covers 106-135 megacycles, includes associated converter and indicating units, and contains all circuitry necessary for flight operations and experimental phase-comparison localiser installations. Equipment presently available, at a unit price of approximately \$1,000 for small quantity experimental installations, is not designed to typify ultimate layout and packaging.

Aircraft Transmitter-Receiver

Collins Radio Co., Cedar Rapids, Iowa, announces a new aircraft transmitter-receiver, type 18S-1, which features automatic frequency shift on ten operating channels with two frequencies per channel. Receiver, covering 2.0 to 10.0 megacycles, uses a separate group of crystals. Complete equipment weighs 60 pounds.

Antenna Loading Unit

Collins has also announced an antenna loading unit as companion equipment for the 18S-1, but suitable for any equipment with comparable characteristics. To be known as type 180K-1, it has a nominal input impedance of 50 ohms and will handle input power up to 125 watts. The 180K-1 has ten pretuned channels and is designed to couple into antennas of 46 ft. length over a frequency range of 2.5 to 10 mc.

Federal VHF Receiver

A single channel, crystal controlled VHF receiver for airline communications and airport traffic control is announced by Federal Telephone & Radio Corp., Newark, N. J. Covering frequencies between 106 and 132 megacycles, the receiver may be either locally or remotely controlled. Equipment mounts in a standard 19 inch relay track and measures seven inches high and nine inches deep. It is designated as Model 139-A.

Automatic Altimeter Setting

Kollsman Instrument Division of Square D Co. is announcing a new altimeter safety device which, when used in connection with special transmitters installed along airways, particularly in mountainous or other danger areas, will automatically correct altimeter setting for areas into which a plane is flying. Radio communication between pilot and ground observer will be unnecessary.

Four-Band Automatic RDF

A new dual remote control automatic radio direction finder, designated the AN/ARN-6, is being produced by Fairchild Camera & Instrument Corp., Jamaica, N. Y. Adding a fourth band, covering 100-200 kilocycles, to the conventional range, this equipment covers a complete range from 100 to 1750 kc. The installation weighs 60 pounds.

Airport Scooter

Illustration shows an airport guide and general utility vehicle developed by Northrop Aircraft's subsidiary, Salisbury Motors,



Inc., 4464 District Blvd., Los Angeles, Calif. Equipped with checkered flag, the scooter can be used for guiding aircraft to parking areas, pacing planes on the runway, etc. It has fully automatic clutch and transmission, and delivers up to 65 miles to the gallon with speeds to 45 mph.

Wire Recorded Entertainment

The Wire Recording Division of Lear, Inc., Grand Rapids, Mich., is now working on transport aircraft installation of continuous programs of music or other entertainment. Passengers will have individual cushion speakers and a selector for a choice of programs which can be recorded in advance on wire and which will not require attention by flight personnel.

Emergency Pocket Compass

A small direct-reading compass developed during the war for life jacket and jungle kit use is now being marketed by Du Page Plastics Co., 10 S. LaSalle St., Chicago 3, Ill. User reads the actual direction in which he is looking without having to study a standard compass dial, and the waterproof case has a built-in flint plus space for matches, identification papers, etc.

Standardize Batteries

A project for standardization of batteries used in smaller aircraft has recently been assigned to Cessna Aircraft Co., Wichita, Kansas, by the National Aircraft Standards Committee of the Aircraft Industries Association.



Adel Strut for Swift—This new hydraulic unit will take a limit load factor of 4.33 on a 1700 lb. airplane. Fully extended, it has a length of 25 1/2 inches between pivot and axle centers, permitting easy accessibility to engine and cabin. The strut as shown accommodates standard 6.00 x 6 aircraft tires mounted on spot type brake wheel drums.

In an effort to arrive at both lower cost and higher performance through standardization, Cessna will first take up problems of size, mounting connections and location of terminals, after which procurement specifications will be studied.

Solenoid Air Valve

Ross Operating Valve Co., 6422 Epworth Blvd., Detroit 10, Mich., is now producing a piston poppet, pilot operated, solenoid controlled air valve. The compact and rugged unit allows operating speeds up to 400 cycles per minute with current consumption 1.2 amperes at 110 volts, 60 cycles. The valve is available in 3-way (open or closed), 4-way, and 4-way (5 port) types, and in quarter, three-eighths, half and three-quarter inch sizes.

G-E Magneto Coil Tester

The Apparatus Department, General Electric Co., Schenectady, N. Y., has developed a magneto coil tester which permits simultaneous high-potential running test to six coils without the necessity of assembling each coil separately into a regular magneto.

Cleaning-Polishing Compounds

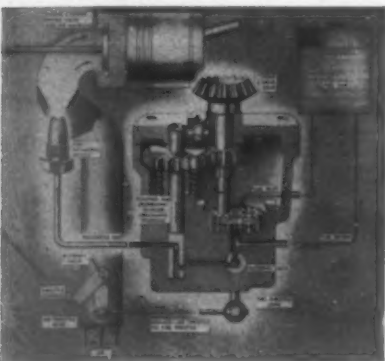
'Flaxoap,' a mild linseed oil soap for cleaning airplane fabric without affecting paint, and 'Airline Metal Polish,' a cleaning and polishing agent for unpainted aircraft metal surfaces, have been developed by the Sherwin-Williams Co., Midland Bldg., Cleveland 1, Ohio.

Propeller Pitchmeter

Whitechester Enterprises, 3140 E. Cajon Blvd., San Diego 4, Calif., is marketing a gravity actuated device for measuring pitch angle of propeller and rotor blades without previous levelling of blade shafts. It does not require reference to any surface other than the blade, and may be used to measure any surface relative to the horizontal.

Small Engine Fuel Injection

A fuel injection system for four and six cylinder engines up to 250 hp. has been developed by Ex-Cell-O Corp., Fuel Injection Div., 1200 Oakman Blvd., Detroit 12, Mich. Fuel injection eliminates need for a carburetor by delivering accurate quantities of raw fuel to each cylinder head and forcing it through atomizing nozzles to be vaporized as it passes through the heated intake valve.



Advantages claimed for fuel injection include positive control over fuel air mixture resulting in better combustion and reduced fuel consumption, elimination of carburetor ice danger, reduction of cylinder head temperatures and simplification of engine installation design. Illustration shows flow diagram for the Ex-Cell-O injection system.

Product Literature & Booklets

Jet assisted take-off applications for transport aircraft, seaplanes, personal planes and gliders, with charts of performance with and without 'Jato,' are included in a large descriptive booklet prepared by Aerojet Engineering Corp., Azusa, Calif.

A German system for 'press-welding' aluminum sheet by closing gas heated dies on spot-welded seams, used during the war to accelerate aircraft radiator production, has been studied by T. G. Haertel. His report is available from the Office of the Publication Board, Department of Commerce, Washington 25, D. C. Photostat, \$1.00; microfilm, 50 cents.

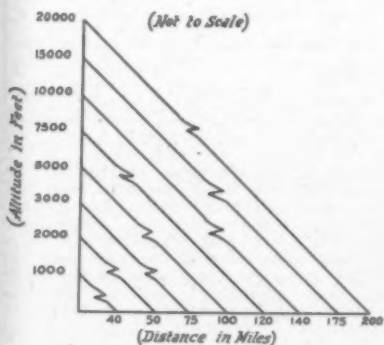
The \$200,000 'Design for Progress' award program sponsored by The James F. Lincoln Arc Welding Foundation, Cleveland, Ohio, is described in a 48 page booklet just issued. A total of \$9,000 in awards has been allocated for papers on aircraft subjects. A similar sum is available for ideas on maintenance machinery and maintenance structures, not necessarily aircraft.

Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md., has issued new bulletins and pamphlets describing the following Bendix equipment: MR-71B receiver, RA-10 series receiver, RTA-1B aircraft communications equipment, TA-6 aircraft transmitter, RA-2D receiver, MS-105A VHF broad band antenna, MN-31 series automatic radio compass, MN-26 series manual radio compass, TA-2 series aircraft transmitters, RA-1 series receivers, and the MT-93 expressor amplifier.

New illustrated bulletins describing Truscon straight slide steel hangar doors and Truscon canopy doors for private plane hangars have been released by Truscon Steel Co., Youngstown 1, Ohio.

The Hilco Hydrow portable aircraft engine lube oil filter, reported capable of completely changing oil in four 1350 h.p. engines in 35 minutes, is described in Bulletin F-116. F-115, also available, illustrates the Hilco Filter Filter. The Hilliard Corporation, 102 W. 4th St., Elmira, N. Y.

A bulletin on the Aerovane wind system, developed for the Navy and now available for commercial and private airports, has been prepared by the Fries Instrument Div., Bendix Aviation Corp., Towson, Baltimore 4, Md. The Aerovane is a combined anemometer and wind vane comprised of transmitter and support with a remote indicating panel on which separate dials show wind direction and force.



VHF Range—To demonstrate the "line-of-sight" characteristics of VHF radio, which normally limits the effective range of transmission and reception to a line between plane and horizon, American Aviation has prepared this chart showing altitude necessary to reach certain distances with VHF. Figures are based on average equipment under average condition and do not allow for such variables as low power output, atmospheric, and possible obstacles between transmitter and receiver which can completely cut off communications.



Stratocruiser Buyers Check Galley Details—Representatives of four airlines planning to use Boeing Stratocruiser equipment gathered recently at the Boeing plant in Seattle to discuss standardization of galley equipment and passenger service arrangements. Left to right, viewing a Maxson Corp. processed food container, are: Russell Secret, Pan American representative at Boeing; Peter de Florez, American Overseas project engineer; R. O. Bullwinkel, Northwest's v.p.-traffic; C. W. Archbold, director of food service for Northwest; C. F. Wilde, Northwest resident representative at Boeing; Al Linstrom, chief steward for SIA (Swedish Intercontinental Airlines); Edward Brown, Northwest engineer; Robert Ellis, Maxson sales representative; and Harold Houston, PAA passenger service manager. The twenty Stratocruisers ordered by Pan American will feature a 14-seat snack bar planned by Howard Ketcham, New York design engineer retained by PAA for the Stratocruiser project.

Copies of the revised Civil Air Regulations Part 04, Airplane Airworthiness, Transport Categories, which was effective November 9, 1945, now are available at the Publications Section, Civil Aeronautics Board.

How modern metallurgy and engineering have made possible use of jet propulsion principles known since 130 B.C. is explained in "Jet Propulsion," a 32-page illustrated booklet just published by Thompson Products, Inc.

"Ship and Aircraft of the U. S. Fleet-Victory Edition," although published late in 1945, has just become generally available. This edition brings up to date the 1944 "2nd War Edition" with ship and aircraft data released since the end of the war. However, for a post-war edition the book is notably lacking in mention of such naval aircraft as the FR-1, F8F, BT2D and BTM. Edited by James C. Fahey. Available at one dollar from Ships and Aircraft, 1265 Broadway, New York 1, N. Y.

The Illinois State Chamber of Commerce has published a booklet setting forth its Aviation Committee's recommendations for the establishment of a statewide feederline and air pick-up service to augment the air trunklines in and out of Chicago. The committee now is working with local groups and municipalities in Illinois in the planning and establishment of the feeder lines.

The office of the publication board, Department of Commerce, has issued a 552-page report (PB-17920) on Deutsche Luft-hansa and the German non-military air transport industry. The study was prepared by the Department's technical industrial intelligence branch and copies cost \$37 for photostats and \$6 for microfilm.

The history and development of the Aerojet Rocket Motor is recorded in an illustrated booklet, entitled "Report From Aerojet," published by the Aerojet Engineering Corporation of Azusa, California.

The Office of Publication Board of the Department of Commerce is making available to the public details of 12 aviation developments taken over from the Germans after the war. Navigational aids, helicopters and details of a 400 hp engine for lightplanes are included in the releases being sold at varying costs. The same office is offering a report of tests by the AAF in the substitution of thermoplastics for metal tubing in aircraft construction.

A project study, "Looking Ahead to the Airport Center of Tomorrow", presenting the case for central heating at a modern airport center and dealing with a hypothetical airport designed to serve a group of medium and smaller sized cities, has been published by the Ric-wil Company, Cleveland, O., manufacturers of insulated pipe conduit systems.

WORLD'S PREMIER AIRPLANE FABRIC

LIGHTER STRONGER SMOOTHER

FLIGHTEX

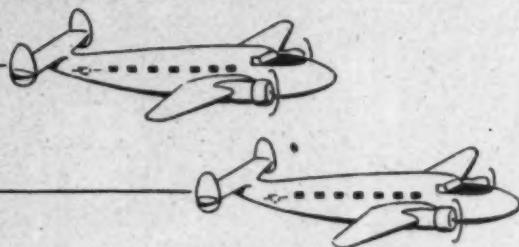
FLIGHTEX FABRICS, INC. • 93 WORTH ST. • NEW YORK 13, N. Y.

Leading Manufacturers of
Fabric and Tapes for the
Aircraft Industry.

Export Representative
AVIQUIPO, Inc.
25 Beaver Street, N. Y.
Cable Add.: 'Aviquipo'

FOR SALE

2



LOCKHEED LODESTARS

Airline airplanes complete in every detail including two-way radio equipment and instruments. Airplanes have operated with commercial licenses since manufactured. Fourteen DeLuxe Lockheed passenger chairs, rest room, and buffet. Pratt & Whitney 1830-SIC 3 G engines. • Also an extensive inventory of Lockheed Lodestar repair parts and ground handling equipment.

Telephone, Write or Wire
D. M. Pattison, Purchasing Agent

WESTERN AIR LINES

6331 Hollywood Boulevard
Los Angeles 28, California

Classified Advertising

AIRLINE OPENINGS (Mostly out of U. S.)
Safety Advisor, including allowance .. \$8100.
Engine Shop Chief .. \$4800. Instrument Shop
Chief .. \$4200. Hydraulic Shop Chief ..
\$4200. Accessory Shop Chief .. \$4200.
Propeller Shop Chief .. \$3600. Line Crew
Chiefs .. to \$3600. Chief Storekeeper, exp.
Douglas parts .. \$3900. (all the foregoing,
except first position listed, provide additional
allowance of \$75.00 per month single status;
\$125.00 per month married). Assistant Shop
Supt. (Maintenance); Maintenance Shop
Foreman; Radio Shop Foreman; Prop and
Hydraulic Shop Foreman; Carburetor and
Accessories Specialist (P & W background);
Foreman Line Service; Mechanics, A & E
Line Service or Ship; all open & High Sal-
aries C 54 experience or equivalent preferred
in all above. Flight Instructor over 30, C 54
time all CAA ratings including Instructors
to \$7000; Airport Lighting Engineer, EE with
heavy Airport lighting experience, High;
Pilots C 54 experience, based U. S. flying in
and out, Open; Flight Engineers, C54; A & E
licensed; min. 100 hours flight experience,
based U. S., flying in and out; start at \$250
per month plus expense; Airline Dispatchers,
C. A. A. licensed to \$4800; Meteorologists,
college grads, experience Sr. Forecasters,
Open; Link Trainer Instructor-maintenance,
young, single, start \$3000; Traffic Trainees,
reservation cargo, passenger service, fluent
French, single status, overseas-station al-
lowance plus to \$2700; Radio Mechanics
M. O. S. 778 or equivalent; Radar Mechanics
M. O. S. 863 or equivalent; Diesel Mechanics
M. O. S. 613 or equivalent; Ground Loran
Mechanic M. O. S. 948 or equivalent (Ex-
G. I. preferred to \$68 per Month plus station
allowance.) Bases out of U. S. are at various
attractive points. Excepting last Ex-G. I.
assignment or where single status indicated,

family may accompany at company expense.
Employment out of U. S. has other advan-
tages. For details, contact Manager, Foreign
Department, Position Securing Bureau, Inc.
(Agency) 45 John Street, N. Y. C., Telephone
Cortlandt 7-9650. All inquiries treated Con-
fidentially.

WANTED a pilot with some air line pilot
experience to represent a well-established
employee-representing organization. This is
not a flying position. Executive work only
with some travel. Employer-employee re-
lations handling ability necessary. Veteran
preferred. Box 449, American Aviation, Ameri-
can Building, Washington 4, D. C.

PILOTS WANTED—Do you have the follow-
ing qualifications?—2500 Hours—100 Hours
actual instruments. Instrument and multi-
engine Rating on Commercial License—1000
Hours multi-engine of which at least 300
Hours are Twin-engine—3rd class R/T P.C.C.
License 1st Class Physical—Age 23-33. If
qualified to meet the above requirements,
an expanding Intra-state Airline in the East
offers an unusual opportunity. Write Box 496,
American Aviation, American Building, Wash-
ington 4, D. C.

"EXPERIENCED Major Airport Manager de-
sires employment as Manager of Municipal
or large Commercial Airport. Experienced
in Airport Management and Design; Air
Traffic Control; Airport Traffic Control; In-
dustrial Aviation; Private Flying; Flying
School and Army service in the Army Air
Corps and Corps of Engineers. Married. Box
502, American Aviation, American Building,
Washington 4, D. C.

Advertisers In This Issue

Advertiser	Page
Aero Industries Corp.	46
Aeroquips Corporation	35
Aircraft Components Corp.	36
All American Aviation Co.	34-50
Frank Ambrose Aviation Co.	38
American Airlines, Inc.	5
American Aviation Publications	51
Charles H. Babb Co.	22
Beech Aircraft Corp.	33
Bendix Aviation Corp. Eclipse Aviation Division	20
Bendix Aviation Corp. Pacific Division	38
Bendix Aviation Corp. Scintilla Magneto Division	37
Boeing Aircraft Co.	39
British Overseas Airways Corp.	12
Chandler-Evans Corp.	49
Colonial Air Lines	29
Collins Radio Co.	37
Cox and Stevens Aircraft Corp.	6
Dinkler Hotels Co., Inc.	8
Dow Chemical Co.	19
Flightex Fabrics, Inc.	57
Goodyear Tire & Rubber Co.	3
Kilgore Mfg. Co.	32
Koppers Co.	9
Lockheed Aircraft Corp.	10
Minneapolis-Honeywell Regulator Co.	27
North American Aviation, Inc.	3rd Cover
Pennsylvania Central Air Lines	47
Piper Aircraft Corp.	45
Portland Cement Association	11
Republic Aviation Corp.	2nd Cover
Solar Aircraft Co.	23
Southwest Airways	30
Stump & Walter Co.	43
The Texas Co.	4th Cover
Vickers, Inc.	7
Western Air Lines, Inc.	58

FOR SALE-LOCKHEED LODESTAR, im-
mediate delivery, Deluxe Executive Plane with
less than 1500 hours total time, powered
by Wright G203A's, two spare engines. Less
than 150 hours since conversion and major
overhaul; fully equipped for instrument and
airline flying; equipped with Bendix Radio
equipment throughout. Box 498, American
Aviation, American Building, Washington 4,
D. C.

LIFE RAFTS, Life Vests, Life Belts, Sur-
vival Equipment. Karl Ort—York, Pa.

ENGINEERS: Major airline desires heating
and ventilating, electrical, and instrument
engineers. Location: Midwest. Give resume
of experience and qualification by letter. Box
503, American Aviation, American Building,
Washington 4, D. C.